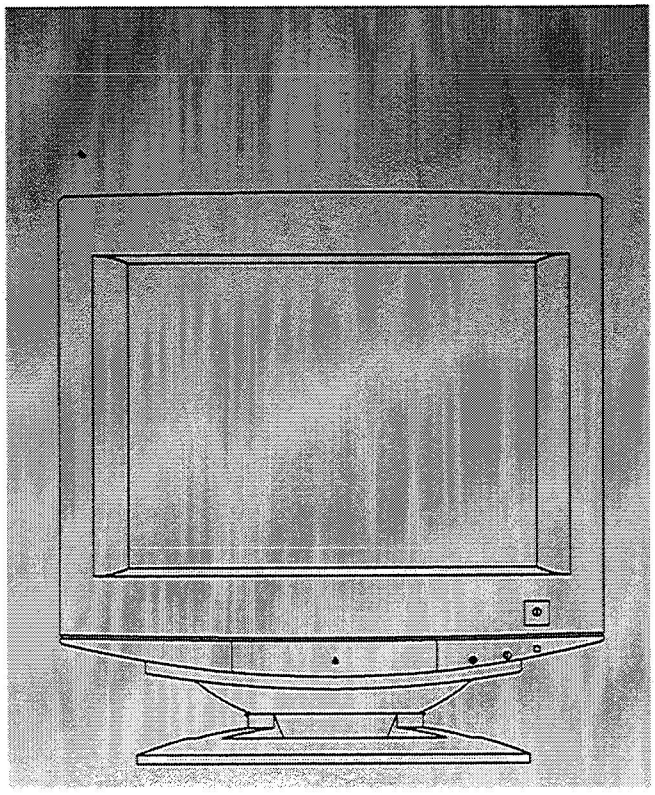
SAMSUNG

COLOR MONITOR

SyncMaster 17GLi (CMG7377L)

SERVICE Manual

COLOR MONITOR



CONTENTS

1. Precautions
2. Specifications
3. Operating Instructions
4. Timing Chart
5. Disassembly and Reassembly
6. Alignments and Adjustments
7. Display Performance
8. List of Abbreviations and Acronyms
9. Troubleshooting
10. Exploded View and Parts List
11. Packing Diagram and Parts List
12. Servicing Diagrams
    - 12-1. Block Diagram
    - 12-2. Wiring Diagram
    - 12-3. Semiconductor Lead Identification
    - 12-4. PCB Layout and Electrical Parts List
    - 12.5 Schematic Diagram

Copyright

© 1995 by Samsung Electronics Co., Ltd.

All rights reserved.

This manual may not, in whole or in part, be copied, photocopied, reproduced, translated, or converted to any electronic or machine readable form without prior written permission of Samsung Electronics Co., Ltd.

SyncMaster 17GLi Service Manual

First edition February 1995.

Printed in Korea.

Trademarks

Samsung is a registered trademark and SyncMaster 17GLi and MacMaster Cable Adapter are trademark of Samsung Electronics Co., Ltd.

Macintosh, Centris, Quadra, Duo Dock, and Power Macintosh are trademarks of Apple computer, Inc.

All other trademarks are the property of their respective owners.

1 Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock and X-rays.

1-1 Safety Precautions

1-1-1 Warnings

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power before servicing.
3. When the chassis is operating, semiconductor heat sinks are potential shock hazards.

1-1-2 Servicing the High Voltage System and Picture Tube

1. When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the chassis and the anode lead. (Disconnect the AC line cord from the AC outlet.)
2. Do not lift the picture tube by the neck.
3. Handle the picture tube only when wearing shatterproof goggles and after completely discharging the high voltage anode.

1-1-3 X-Rays and High Voltage Limits

1. Keep the high voltage below the specified maximum level. Be sure all service personnel are aware of the procedures and instructions covering X-rays.
   The only potential source of X-ray in current solid state display monitors is the tube. However, the picture tube does not emit measurable X-ray radiation if the high voltage is as specified in the fire and shock hazard instruction. Only when high voltage is excessive are X-rays capable of penetrating the shell of the picture tube, including the lead in glass material.
2. It is essential that service technicians have an accurate high voltage meter available at all times. Check the calibration of this meter periodically.
3. High voltage should always be kept at the rated value, no higher. Operation at high voltages may cause failure of the picture tube or high voltage circuitry and, also under certain conditions, may produce X-rays in excess of acceptable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-ray problem. Test the brightness and use a meter to monitor the high voltage each time a color monitor comes in for service. Make sure the high voltage does not exceed its specified value and that it is regulating correctly.
5. The picture tube is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.
6. When troubleshooting a monitor with excessively high voltage, avoid being unnecessarily close to the monitor. Do not operate the monitor longer than is necessary to locate the cause of excessive voltage.

1-1-4 Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment cover or shields, isolation resistor-capacitor networks, mechanical insulators, etc.

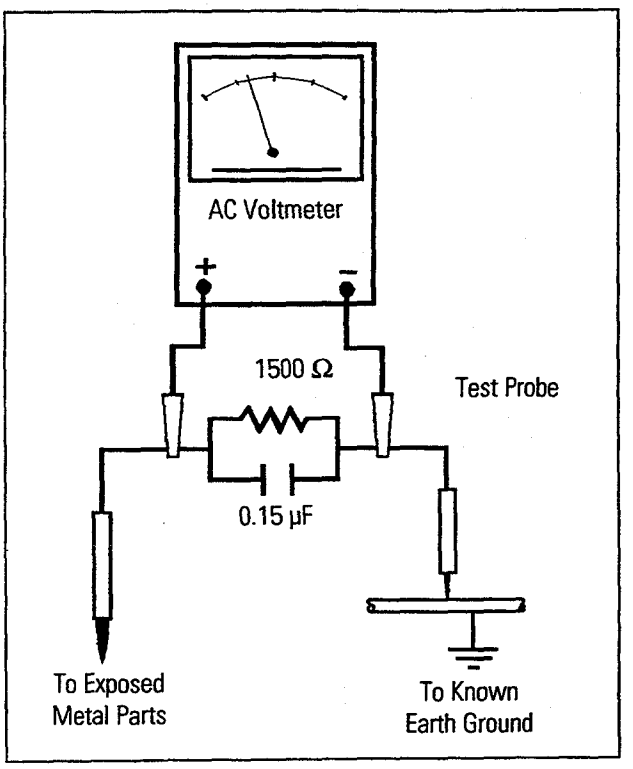


Figure1-1. Leakage Current Test Circuit

3. To be sure that no shock hazard exists, check for leakage current in the following manner:

   a. Plug the AC line cord directly into a 120 Volt AC outlet. (Do not use an isolation transformer for this test)

   b. Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with an exposed metal cabinet part and a known earth ground, such as an electrical conduit or electrical ground connected to an earth ground.

   c. Use a SSVM or VOM with 1000 ohms per-volt or higher sensitivity to measure the AC voltage drop across the resistor (see Figure 1-1).

   d Connect the resistor to an exposed metal part having a return path to the chassis (metal cabinet, screw heads, knobs, shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

   e. Any reading of 5.25 Volt RMS (this corresponds to 3.5 milliampere AC) or more is excessive and indicates a potential shock hazard. Correct the shock hazard before returning the monitor to the user.

1-1-5 Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by ⚠ on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and / or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

1-2 Servicing Precautions

Warning: An electrolytic capacitor installed with the wrong polarity might explode.

Caution: Before servicing instruments covered by this service manual and its supplements, read and follow the Safety Precautions section of this manual.

Note: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

1-2-1 General Servicing Precautions

1. Servicing precautions are printed on the cabinet. Follow them.
2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) remove or reinstall any component or assembly, (b) disconnect an electrical plug or connector, (c) connect a test component in parallel with an electrolytic capacitor.
3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.
5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug.

   The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
8. Always connect a test instrument's ground lead to the instrument chassis ground *before* connecting the positive lead; always remove the instrument's ground lead last.

1-3 Electrostatically Sensitive Devices (ESD) Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components commonly are called Electrostatically Sensitive Devices (ESD). Examples of typical ESD devices are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution : Be sure no power is applied to the chassis or circuit and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.
9. ⚠ marks parts for ESDs on schematic diagrams and electrical parts list.

2 Specifications

Classification	Specification
Picture Tube:	17-Inch (43 cm): 16-Inch (40 cm) Visual, Full Square/Flat Face Tube, 90° deflection, 0.28 mm Dot pitch, Semi-tint, Non-glare, Antistatic silica coating, Invar shadow mask.
Scanning Frequency	Horizontal : 30 kHz to 65 kHz (Automatic). Vertical : 50 Hz to 120 Hz (Automatic).
Display Colors Analog Input	Unlimited Colors.
Maximum Resolution	Horizontal : 1280 Dots. Vertical : 1024 Lines.
Input Video Signal	Analog 0.714 Vp-p Positive at 75 Ω Terminated.
Input Sync Signal	Separate Sync : TTL level Positive/Negative. Sync-on-Green : Composite Sync 0.286 Vp-p±5 %/Negative.(Video on Vp-p positive) Composite Sync : TTL level Positive/Negative.
Maximum Pixel Clock	110 MHz.
Active Display	Horizontal : 306 mm±3 mm (4:3 ratio) / 287.5 mm±3 mm (5:4 Ratio). Vertical : 230 mm±3 mm.
Input Voltage	AC 90-264 Volt, 60 Hz/50 Hz±3 Hz.
Power Consumption	100 Watt (Max).
Dimension	Unit (HxWxD) : 16.5 x 16.9 x 17.3 Inches (420 x 428 x 439 mm). Carton (HxWxD).: 21.2 x 21.5 x 21.9 Inches (538 x 545 x 554 mm).
Weight	Net/Gross: 39.7 Lbs (18 kg) / 46.3 Lbs (21 kg).
Environmental Considerations	Operating Temperature: 32° F to 104° F (0° C to 40° C). Humidity : 10 % to 80 %. Storage Temperature : -4° F to 113° F (-20° C to 45° C). Humidity : 5 % to 95 %.

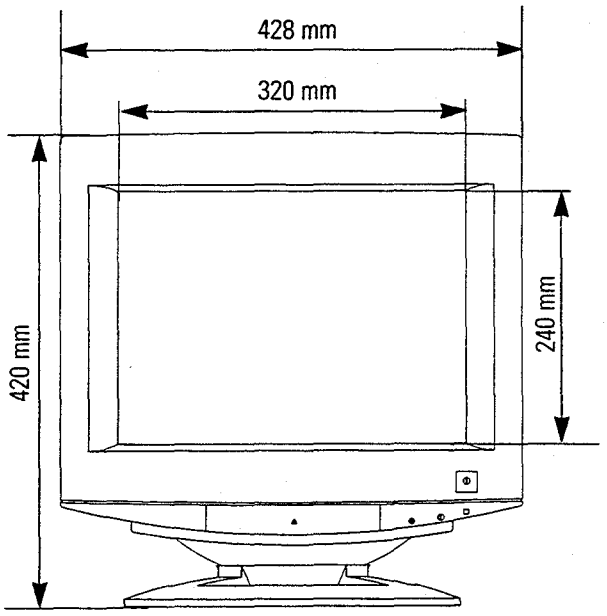
- The SyncMaster 17GLi model complies with SWEDAC (MPRII) recommendations for reduced electric and magnetic fields.
- **Note 1:** This manual covers the following model.

CRT Screen	CRT Dot pitch	1737 Cabinet
Non-glare	0.28	SyncMaster 17GLi
CRT Code No.		897 250144CA (HITACHI)/897 250183AA (SDD)
Remark		MPRII

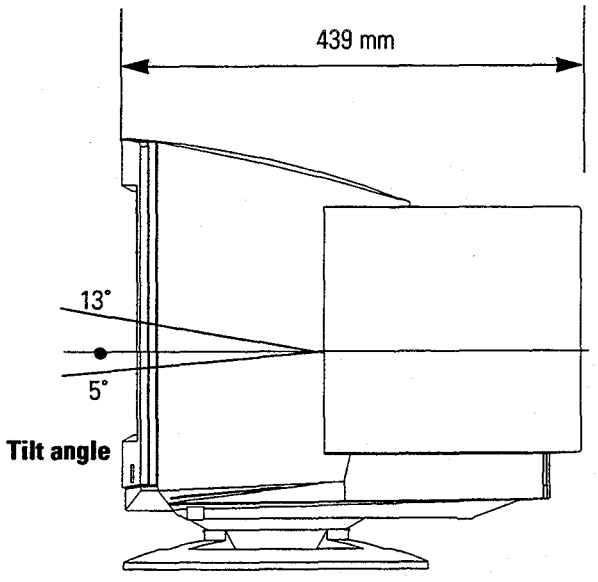
- **Note 2:** Designs and specifications are subject to change without prior notice.

2-1 Dimensions

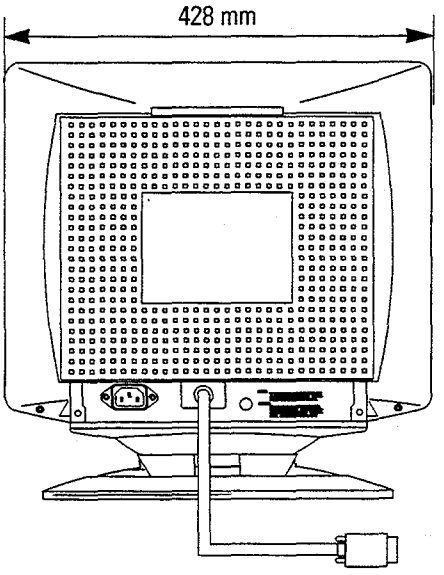
2-1-1 Front View



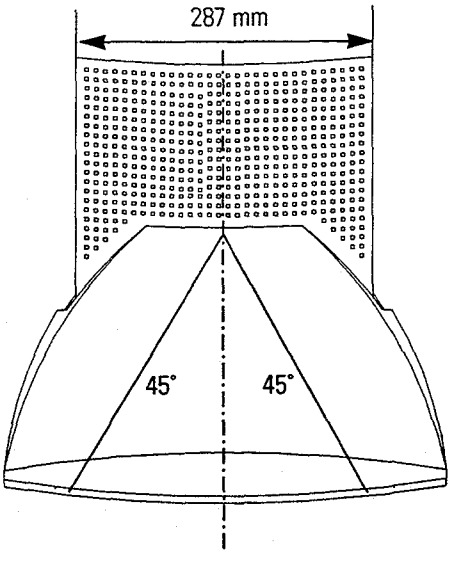
2-1-2 Side View



2-1-3 Rear View



2-1-4 Top View



Swivel angle

2-2 Pin Assignments

Sync Type / Pin No.	15-Pin Signal Cable Connector (Figure 2-1)			Cable Adapter (Figure 2-2)
	Separate	Composite	Sync On Green	Macintosh
1	Red	Red	Red	GND-R
2	Green	Green	Green+H/V Sync	Red
3	Blue	Blue	Blue	H/V Sync
4	GND	GND	GND	Sense 0
5	DDC Return	DDC Return	DDC Return	Green
6	GND-R	GND-R	GND-R	GND-G
7	GND-G	GND-G	GND-G	Sense 1
8	GND-B	GND-B	GND-B	Reserved
9	Reserved	Reserved	Reserved	Blue
10	GND-Sync/Self-Raster	GND-Sync/Self-Raster	GND-Sync/Self-Raster	Sense 2
11	GND	GND	GND	GND
12	DDC Data	DDC Data	DDC Data	V-Sync
13	H-Sync	H/V-Sync	Not Used	GND-B
14	V-Sync	Not Used	Not Used	GND
15	DDC Clock	DDC Clock	DDC Clock	H-Sync

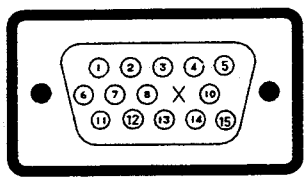


Figure 2-1. Male Type

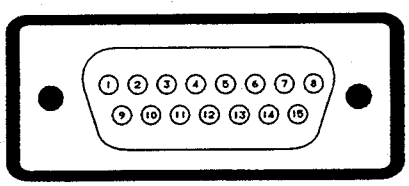


Figure 2-2. Male Type

Memo

3 Operating Instructions

This section of the service manual explains how to connect the SM17GLi color monitor to IBM or PC-compatible computers, as well as to Apple Macintosh computers. It also shows the location of the monitor's front panel controls, explains their functions and gives examples that show how to properly adjust these controls.

3-1 Installation

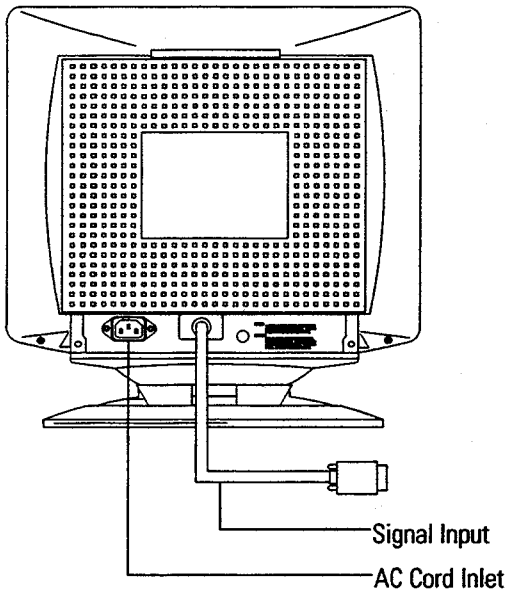


Figure 3-1. Rear of Monitor

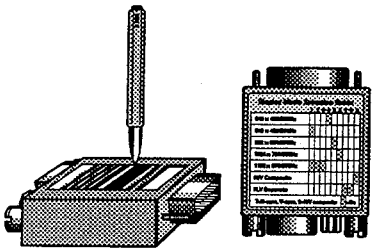
3-1-1 Connection to Your Computer IBM or PC-Compatible

To install your monitor, follow these steps:

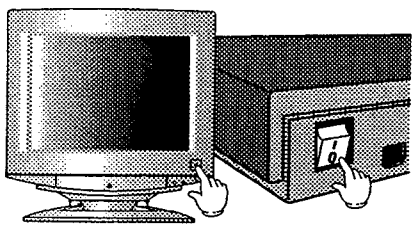
1. Turn off the power to the monitor and computer.
2. Place the monitor on a flat, sturdy surface.
3. Connect one of the 15-pin D-sub connectors on the signal cable to the video port on your computer. Tighten the attachment screws. (Refer to your computer owner's manual for the location of the video connector.)
4. Connect the power cable to the monitor and plug the power cord into the power outlet.
5. Adjust the screen tilt and swivel to suit your needs.
6. Turn on your computer and then the monitor.

3-1-2 Connection to Your Computer MacintoshII Family Computers

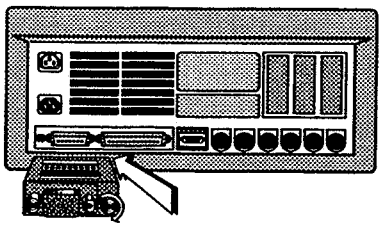
1. This monitor requires a cable adapter for use with a Macintosh computer. The MacMaster Cable Adapter supports all monitors and all Macintosh, Centris, Quadra, Duo Dock, and Power Macintosh computers. If you do not already have a cable adapter, check with your computer dealer.
2. Refer to your computer and cable adapter User's Manuals to help determine the appropriate display mode and resolution. This monitor supports 640x480, 832x624 and 1024x768 resolutions for the Macintosh. The resolution most highly recommended is 832x624 or 1024x768.
3. Set the display mode and resolution using the DIP switches on the cable adapter.



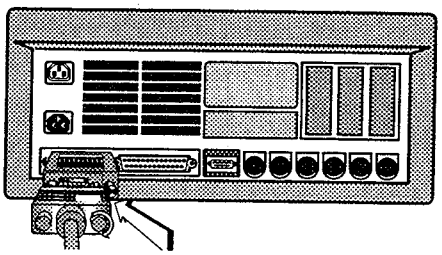
4. Power off your Macintosh computer and monitor including other peripheral devices.



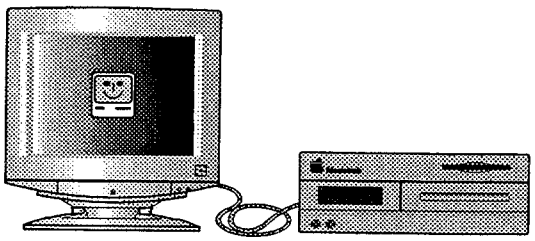
5. Connect the cable adapter to the video port of the Macintosh computer. Tighten the screws on the cable adapter.



6. Connect the monitor signal cable to the other end of the cable adapter. Tighten the screws of the monitor signal cable onto the cable adapter to ensure proper connection.



7. Connect one end of the power cord to the monitor and the other end to the power outlet.
8. Power on your monitor and Macintosh computer. If you see any message on your monitor screen, installation is complete. If you do not see any messages, check each of your connections and DIP switch settings and reboot your system.



9. If you need more information, please refer to the MacMaster Cable Adapter User's Manual, or contact the Technical Support Center.

3-2 Front View and Controls

3-2-1. Front View

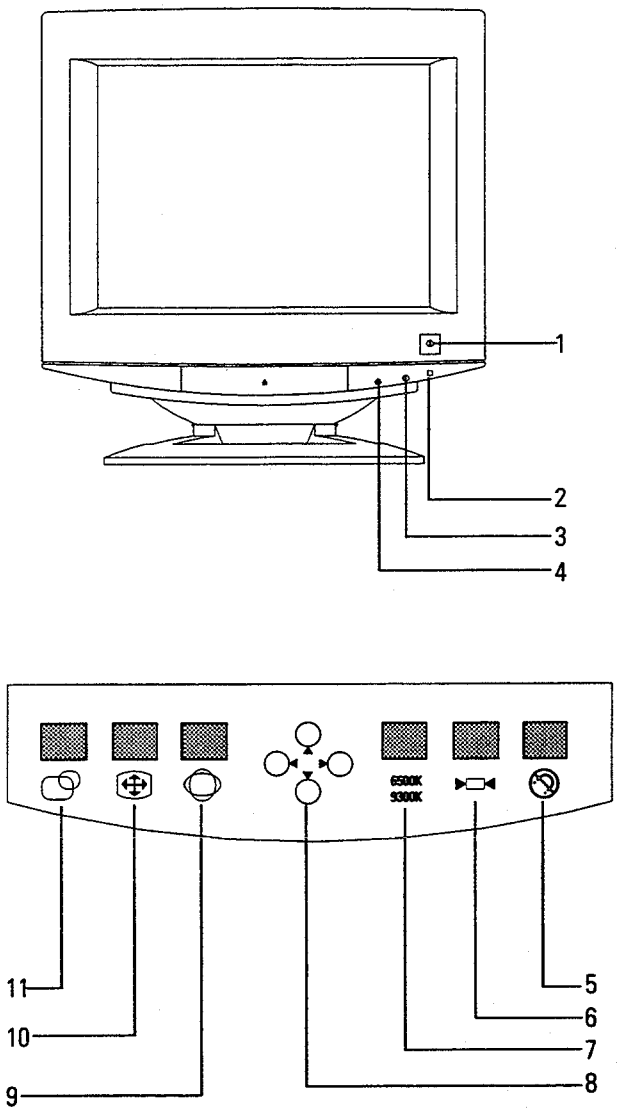


Figure 3-2. Front Control Panel

3-2-2 Front Control Panel

Location	Symbol	Description
1		Power Button (Push)
2		Power Indicator LED (Dual Color)
3		Contrast Control
4		Brightness Control
5		Degauss Button
6		Recall Button
7	6500K 9300K	Color Temp. Control
8		Adjustment Control
9		G/D (Geometric Distortion)
10		Size (H/V) Information
11		Position (H/V) User, Preset Mode

3-3 Controls and Functions

3-3-1 Basic Controls and LED Indicator Functions

Power button:

The power button turns the monitor power on and off. Push the power button once to turn monitor power on; the power on indicator LED also turns on. Push the button again to turn monitor power off.

Power indicator (Dual color):

The power indicator shows the state of your monitor.

When the monitor operates normally, the indicator LED glows green.

When the monitor operates in one of the power saving modes, the indicator LED is orange or blinks orange and green.

Contrast control:

The contrast control adjusts the degree of difference between dark and light areas of the image.

Brightness control:

The brightness control adjusts the overall brightness of the display image.

Adjustment Control

Use Adjustment Control buttons to adjust the display image while a control function is active (the indicator is orange). However, you cannot adjust the display image while a control function is disabled (the indicator is green).

Push the up (▲) or right (▶) button to increase the value of the adjustment function. Push the down (▼) or left (◀) button to decrease the value of the adjustment function.

Note: The monitor automatically saves your preferred display settings 3 to 4 seconds after the last adjustment.

3-3-2 Microprocessor Controls and Functions

General Description

This monitor has mode display settings for each of the standard timing signals listed on the timing chart. The monitor automatically adjusts itself to an optimum size and position when it senses one of the standard timing signals. However, some users may wish to adjust the monitor to their own preferred settings rather than the factory settings. The monitor's microprocessor automatically saves the new settings for a specific timing signal and automatically adjusts itself when the monitor senses that signal. See pages 4-1 and 4-2 for the standard timing chart.

On Screen Display

The monitor features an On Screen Display (OSD) that shows information about the display settings. The OSD appears on the screen when you select a function button. The OSD shows the name, range and current setting of the control function. In addition, the OSD shows the current input signal frequency and the list of user and factory preset timing. The OSD remains active for approximately 10 seconds after completion of any adjustments.

Control Function Buttons

The monitor uses single and multi-function buttons. Single function buttons, when pressed, allow access to one of the control functions. Multi-function buttons can access a second function in addition to the first one. To access the second adjustment function, push the function button twice. The chart below shows you the buttons that allow access to a second function.

Table 3-1: Multi-Function Control Buttons

Button No.	Push Once	Push Twice
11	Position (H/V)	User, Preset mode
10	Size (H/V)	Information
9	Pincushion/ Trapezoid	Parallelogram/ Tilt

Position (H/V) / User, Preset Mode

First Function: Position (H/V)

Push this button once to adjust the horizontal and vertical position (centering) of the display.

Horizontal position control

Push position button and adjust horizontal position with left (◄) and right (►) buttons.

Vertical position control

Push position button and adjust vertical position with up (▲) and down (▼) buttons.

Second Function: User, Preset Mode

Push this button twice to access the user and preset modes. The OSD shows the contents of the user modes and factory preset timing modes. Use the adjustment control buttons to "page" through the list.

Size (H/V) / Information:

First Function: Size (H/V)

Push this button once to adjust the horizontal and vertical size of the display.

Horizontal size control

Push size button once and adjust horizontal size (width) with left (◄) and right (►) buttons

Vertical size control

Push size button once and adjust vertical size (height) with up (▲) and down (▼) buttons

Second Function: Information

Push this button twice to access the Information function. The OSD shows the values for this monitor's specifications. Use the Adjustment Control buttons to page through the list.

G/D (Geometric distortion):

First Function: Pincushion/ Trapezoid

Push this button once to correct for pincushion and trapezoid distortions of the display.

Pincushion control

Push G/D button once to display the pincushion OSD. To correct the vertical sides of the display area from bowing in (pincushion) or bowing out (barrel distortion), use the left (◄) and right (►) buttons until the sides are straight

Trapezoid control

Push G/D button once to display the pincushion OSD. Push either the up (▲) or down (▼) button to display the trapezoid OSD. Use the up (▲) and down (▼) buttons again to correct any trapezoidal distortion of the display.

Second Function: Parallel/Tilt

Push this button twice to adjust the Parallel and Tilt of the display.

Parallel control

Push G/D button twice to display the parallel OSD. Adjust the parallel of the display with the left (◄) and right (►) buttons.

Tilt control

Push G/D button twice to display the tilt OSD. Push either the up (▲) or down (▼) button to display the tilt OSD. Use the up (▲) and down (▼) buttons again to correct tilt of the display.

Color Temperature

6500K
9300K

Use this button to choose the color temperature of the display. After pushing the color temperature button, use the up (▲) or down (▼) button to select between 9300°K color (channel 1) and 6500°K color (channel 2).

Recall

Use this button to recall factory preset settings. When you push the recall button, the indicator LED changes color from green to orange (the same as any other function) and the OSD appears.

Hold down the recall button for several seconds until the indicator LED's color changes to green, this indicates that the factory settings for that timing have been recalled. The OSD shows the progress of the recall function.

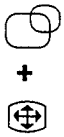
Note: This operation resets all of the data in the user memory area for the current signal timing.

Degauss

Magnetic fields can build up on the CRT and cause color impurity. Use the degauss button to demagnetize the CRT.
Push the button once to activate the degaussing circuit. The degaussing circuit automatically turns itself off after a few seconds.

Warning: Don't hold this button down for longer than 3 seconds. If you do, it resets all of the data in the user memory area. If this occurs, you must remake your user adjustments.

Pinbalance & V-Linearity



To activate the vertical linearity and pinbalance adjustment function, push and hold in both the position and the size buttons for longer than three seconds, or until the power indicator LED changes from orange to green and back to orange.

Use the right (▶) and left (◀) button to correct the pinbalance distortion of one or both sides.

Use the up (▲) and down (▼) buttons to correct the vertical linearity.

3-4 Power Management System (Power Saving Function)

If your computer system features a display power management function, this monitor, when signaled, enters power saving modes. The purpose of power management is to automatically reduce power consumption while the computer system is temporarily not in use. This monitor can enter three different power saving modes as described below.

Note 1: When used with a computer equipped with DPMS (VESA), this monitor is EnergyStar compliant.

Table 3-1. Display Power Management Signaling (DPMS) Standard

State / Items	Normal Operation	Power saving function EPA/NUTEK		
		Standby Mode	Suspend Mode Position A	Power Off Mode Position B
Horizontal Sync	Active	Inactive	Active	Inactive
Vertical Sync	Active	Active	Inactive	Inactive
Video	Active	Blanked	Blanked	Blanked
Power Indicator	Green	Orange	Orange/Green Blinking	Orange Blinking
Power Consumption/hr	100W (max.) 80.8W (nominal)	75W (max.) 66.5 W	Less than 15W	Less than 5W

Note 2: The monitor automatically returns to the normal operation state when horizontal and vertical sync returns. This occurs when you move your mouse or press a key on your keyboard.

This monitor is EPA Energy Star compliant and NUTEK compliant when used with a computer equipped with VESA DPMS function. If your computer system cannot support a display power management function, you may purchase an optional DPMS software program to have power saving function please contact Samsung, or your dealer, for more information.

For Energy conservation, turn your monitor OFF when the monitor is not needed, or when leaving it unattended for long periods.

Memo

4 Timing Chart

This section of the service manual describes the timing that the computer industry recognizes as standard for computer-generated video signals.

Table 4-1. Timing Chart

Mode / Timing	IBM			VESA		
	VGA1/70 Hz 640x350	VGA2/70 Hz 720x400	VGA3/60 Hz 640x480	640/72 Hz 640x480	640/75 Hz 640x480	800/75 Hz 800x600
fH (kHz)	31.469	31.469	31.469	37.861	37.500	46.875
A µsec	31.778	31.777	31.777	26.413	26.667	21.333
B µsec	3.813	3.813	3.813	1.270	2.032	1.616
C µsec	1.907	1.907	1.907	4.064	3.810	3.232
D µsec	25.422	25.422	25.422	20.317	20.317	16.162
E µsec	0.636	0.636	0.636	0.762	0.508	0.323
fv (Hz)	70.086	70.087	59.940	72.809	75.000	75.000
O msec	14.268	14.268	16.683	13.735	13.333	13.333
P msec	0.064	0.064	0.064	0.079	0.080	0.064
Q msec	1.907	1.080	1.048	0.739	0.427	0.448
R msec	11.122	12.711	15.253	12.678	12.800	12.800
S msec	1.176	0.413	0.318	0.237	0.027	0.021
Clock Frequency (MHz)	25.175	28.322	25.175	31.500	31.500	49.500
Polarity H.Sync	Positive	Negative	Negative	Negative	Negative	Positive
V.Sync	Negative	Positive	Negative	Negative	Negative	Positive
Remark	—	—	—	—	—	—

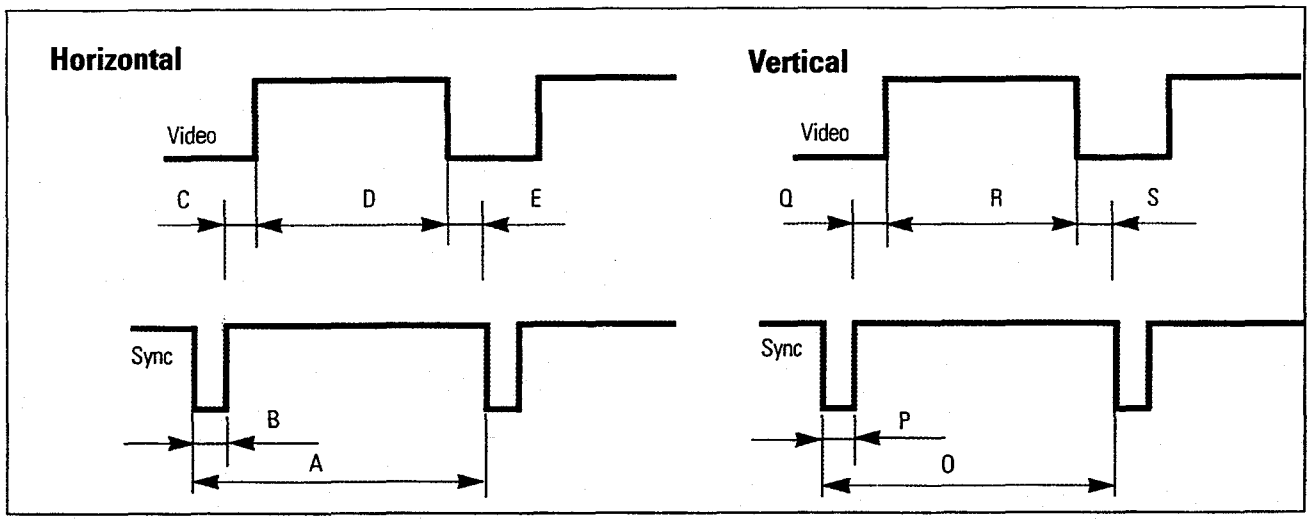
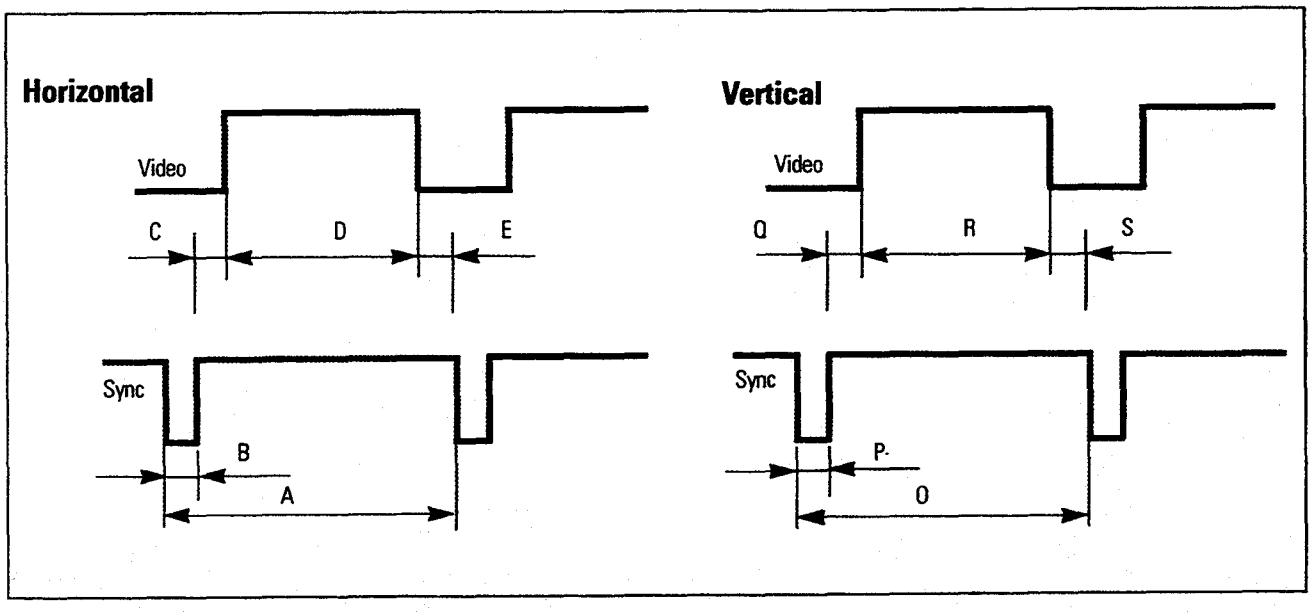


Table 4-1. Timing Chart Continued

Mode / Timing	VESA		SIGMA	ATI	Apple Mac.
	1024/60 Hz 1024x768	1024/75 Hz 1024x768	640/120 Hz 640x480	1280/60 Hz 1280x1024	832/75 Hz 832x624
fH (kHz)	48.363	60.023	61.275	63.953	49.726
A µsec	20.677	16.660	16.320	15.636	20.110
B µsec	2.092	1.219	0.800	1.018	1.117
C µsec	2.462	2.235	2.400	2.255	3.910
D µsec	15.754	13.003	12.800	11.636	14.524
E µsec	0.369	0.203	0.320	0.727	0.559
fv (Hz)	60.004	75.029	120.619	59.938	74.551
O msec	16.666	13.328	8.291	16.684	13.414
P msec	0.124	0.050	0.131	0.078	0.060
Q msec	0.600	0.466	0.310	0.579	0.784
R msec	15.880	12.795	7.834	16.012	12.549
S msec	0.062	0.017	0.016	0.016	0.020
Clock Frequency (MHz)	65.000	78.750	50.000	110.000	57.284
Polarity H.Sync	Negative	Positive	Negative	Negative	Negative
V.Sync	Negative	Positive	Negative	Negative	Negative
Remark	—	—	—	—	—

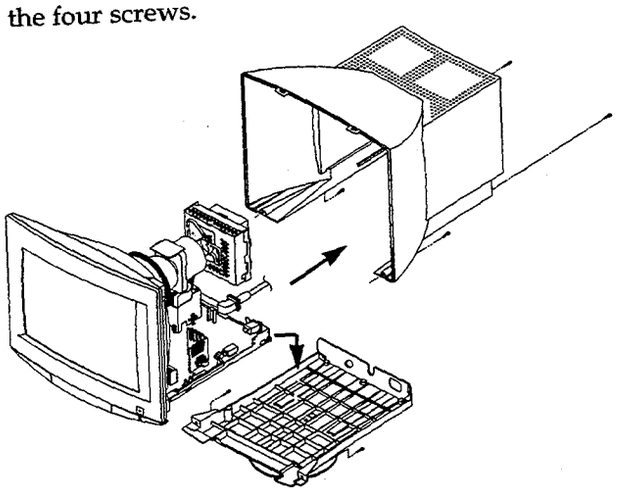


5 Disassembly and Reassembly

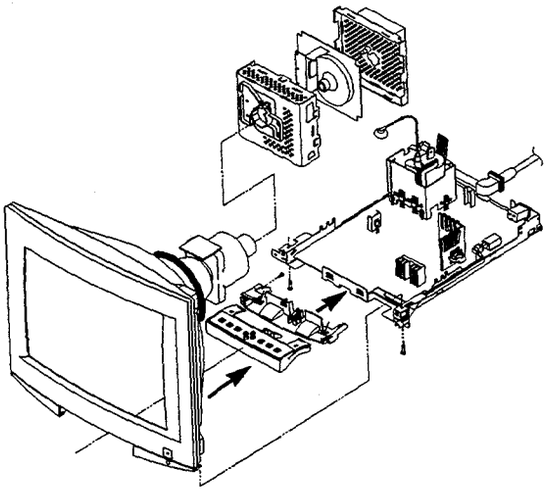
This section of the service manual describes the disassembly and reassembly procedures for the SyncMaster 17GLi monitor.

5-1 Disassembly

1. Stand monitor on its front with the screen down and the base closest to you. (Make sure nothing will damage the screen)
2. Working from the back of the monitor, remove the four screws.



3. Tip the cabinet away to release tabs and pull it up and away from the monitor.
4. Pull the snap downward from the PCB frame and push the stand assembly backward from the PCB frame.



5. Remove the two screws.

5-2 Reassembly

To reassemble the monitor, follow the instructions for disassembly, but use the reverse order.

Memo

6 Alignments and Adjustments

This section of the service manual explains how to control the linearity, raster, size, position, pincushion, parallelogram, trapezoid, and pinbalance. Additionally, this section describes how to use the micom control jig to make the adjustments.

6-1 Adjustment Conditions

Warning: Changes made without the micom jig are saved only to the user mode settings. As such, the settings are not permanently stored and may be inadvertently deleted by the user.

Power Supply Voltage

AC 90 ~ 264 volt (60/50 Hz±3 Hz).

High Voltage Control

Adjust VR501 to 26 kV±0.2 kV.

Testing and Burn-in Mode

For testing and burn-in, remove the signal cable from the monitor. Power on the monitor and warm it up. Use the burn-in mode to age the monitor.

Warm-Up Time

The display must be on for 30 minutes before starting alignment. Warm-up time is especially critical in color temperature and white balance adjustments.

Signal

Video analog 0.714 Vp-p positive at 75 ohm terminated.

Sync: Separate/composite
(TTL level negative/positive).

Sync-on-Green:
Composite sync 0.286 Vp-p negative,
Video 0.714 Vp-p positive.

Scanning Frequency

Horizontal : 30 kHz-65 kHz (Automatic).
Vertical : 50 Hz-120 Hz (Automatic).

Unless otherwise specified, adjust to 1024x768 mode (H : 60 kHz, V: 75 Hz) signals. Refer to table 4-1 on page 4-1 and 4-2.

6-2 Prepare Main PCB for Adjustment

+B 195 V Line Adjustment

(No beam, Contrast: Min, Brightness: Min)

Adjust VR601 to be DC 195 V±1 V at TP601 and GND.

High Voltage Adjustment

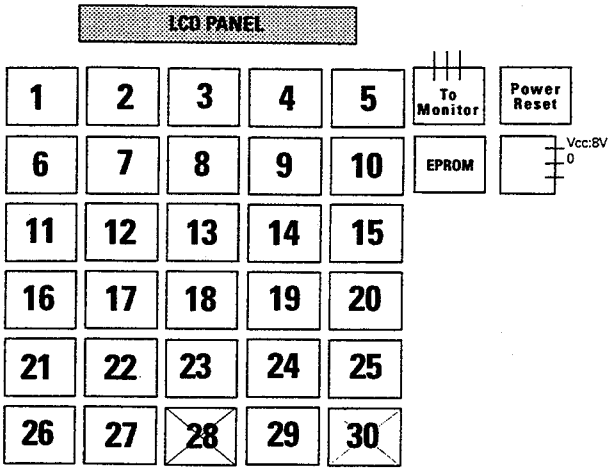
(No beam, Contrast: Min, Brightness: Min)

Adjust VR501 to 26 kV±0.2 kV.

Horizontal Raster Center

Adjust SW401 so that the back raster comes to the center when you apply a signal of 60 kHz/75 Hz.

6-3 Using the Microcomputer Control Jig



Notes:

Changes made without the micom jig are saved only to the user mode settings. As such, these setting are not permanently stored and may be inadvertently deleted by the user.

Selecting the monitor series and type:

1. Simultaneously press buttons **29** and **24** to select "M-Project" as the monitor series.
2. Press button **25** to select the monitor type. Hold down button **25** until you see "M17L" plus the OEM name for the monitor under test. For example, hold down button **25** until you see "M17L" if you are working on a "Dell 17."

Table 6-1. Micom Control Jig Function Keys

Key No.	General Control Key Function	Color Control Key Function
1	Horizontal Position Right	R-Gain Up
2	Horizontal Position Left	R-Gain Down
3	Parallelogram Up	ACL Up
4	Parallelogram Down	ACL Down
5	Mode Save	Color Save
6	Horizontal Size Up	G-Gain Up
7	Horizontal Size Down	G-Gain Down
8	Vertical Linearity Up	Color CH-1 Standard Save
9	Vertical Linearity Down	Color CH-2 Standard Save
10	Standard Save	ACL Save
11	Vertical Position Up	B-Gain Up
12	Vertical Position Down	B-Gain Down
13	Pinbalance Up	No Function (Don't Use)
14	Pinbalance Down	No Function (Don't Use)
15	All mode save	No Function (Don't Use)
16	Vertical Size Up	R-Bias Up
17	Vertical Size Down	R-Bias Down
18	Tilt Up	No Function (Don't Use)
19	Tilt Down	No Function (Don't Use)
20	User Mode Delete	No Function (Don't Use)
21	Barrel	G-Bias Up
22	Pincushion	G-Bias Down
23	Color/General Control toggle	Color/General Control toggle
24	F-Project/M-Project toggle	F-Project/M-Project toggle
25	Model Selection	Model Selection
26	Trapezoid Up	B-Bias Up
27	Trapezoid Down	B-Bias Down
28	No Function (Don't Use)	No Function (Don't Use)
29	Shift	Shift
30	No Function (Don't Use)	Manual/Auto Color Control

6-2-1 General Control

Use general control to test and adjust the shape and size of the display.

1. Simultaneously press buttons **29** and **23** to toggle between General Control and Color Control. Select "General Control."
2. Standard Save: Press button **10** to do a memory data dump and load the standard picture data from the EPROM on the micom control jig.

   Note: This step is necessary only if the EPROM on the control jig has more recent data than the EPROM on the monitor PCB. Check for a Service Bulletin or Service Manual Supplement.
3. Optimize the standard timing mode (60 kHz /75 Hz) using the micom control jig as described on pages 6-4 and 6-5 of this manual.
4. After completing all standard timing mode adjustments, press button **15** to save the data for all modes. The monitor's microprocessor adjusts the other modes according to a predefined formula.
5. Using a signal generator, scan the other timing modes and make adjustments as needed. Each time you make a change, press button number **5** to save the data.

6-2-2 Color Control

Use color control to test and adjust the color coordinates the monitor displays.

1. Simultaneously press buttons **29** and **23** to toggle between General Control and Color Control. Select "Color Control."
2. Press button **8** (for 9300K setting) or **9** (for 6500K settings) to do a memory data dump and to load the standard picture color data from the micom control jig.

   Note: This step is necessary only if the EPROM on the control jig has more recent data than the EPROM on the monitor PCB. Check for a Service Bulletin or Service Manual Supplement.
3. Optimize the standard timing mode using the micom control jig as described on pages 6-6 and 6-7 of this manual.
4. Press button **5** to save the picture color data.
5. Press button **10** to save ACL data.
6. When you are through, disconnect the micom control jig and proceed with other tests and adjustments.

6-4 Display Control Adjustments

Unless otherwise specified, adjust the EXT-VR:

Contrast : Max. (Fully clockwise)
Brightness : Max. (Fully clockwise)

Horizontal Size Adjustment

With microcomputer control jig:
Press the horizontal size up button (**6**) or horizontal size down button (**7**) to adjust the horizontal size of the display pattern to 306 mm. (Tolerance: ±3 mm.)

Without microcomputer control jig:
After pushing the size button, push the (▶) button or (◀) button to adjust the horizontal size of the display pattern to 306 mm. (Tolerance ±3 mm.)

Vertical Size Adjustment

With microcomputer control jig:
Press the vertical size up button (**16**) or the vertical size down button (**17**) to adjust the vertical image or pattern to 230 mm. (Tolerance: ±3 mm.)

Without microcomputer control jig:
After pushing the size button, push the (▲) button or (▼) button to adjust the vertical size of the display pattern to 230 mm.
(Tolerance: ±3 mm.)

Horizontal Position Adjustment

With microcomputer control jig:
Press the horizontal position right button (**1**) or the horizontal position left button (**2**) to center the image or test pattern on the raster.

Without microcomputer control jig:
After pushing the position button, push the (▶) button (move right) or (◀) button (move left) to center the image or test pattern on the raster.

Vertical Position Adjustment

With microcomputer control jig:
Press the vertical position up button (**11**) or vertical position down button (**12**) to center the vertical image or pattern on the raster.

Without microcomputer control jig:
After pushing the position button, push the (▲) button (move up) or (▼) button (move down) to center the image or the test pattern on the raster.

Vertical Linearity Adjustment

With microcomputer control jig:
Press the vertical linearity up button (**8**) or vertical linearity down button (**9**) to optimize the image or the test pattern.

Without microcomputer control jig:
To activate the vertical linearity adjustment function, push and hold in both the position and the size buttons for longer than three seconds, or until the power indicator LED changes from orange to green and back to orange.
Use the right (▶) and left (◀) buttons to correct the vertical linearity.

Trapezoid Adjustment

With microcomputer control jig:
Press the trapezoid up button (**26**) or trapezoid down button (**27**) to make the image or the test pattern rectangular.

Without microcomputer control jig:
After pushing G/D button once, push the (▲) button or (▼) button to make the image or the test pattern rectangular.

Pinbalance Adjustment

With microcomputer control jig:

Press the pinbalance up button (**13**) or pinbalance down button (**14**) to optimize the image or test pattern.

Without microcomputer control jig:

To activate the pinbalance adjustment function, push and hold in both the position and the size buttons for longer than three seconds, or until the power indicator LED changes from orange to green and back to orange.
Use the up (▲) and down (▼) buttons to correct the pinbalance distortion of one or both sides.

Parallelogram Adjustment

With microcomputer control jig:

Press the parallelogram up button (**3**) or the parallelogram down button (**4**) to make the image or test pattern rectangular.

Without microcomputer control jig:

After pushing G/D button twice, push (▶) button or (◀) button to make the image or test pattern rectangular.

Side Pincushion Adjustment

With microcomputer control jig:

Press the barrel button (**21**) or the pincushion button (**22**) to straighten the sides of the test pattern or image.

Without microcomputer control jig:

After pushing G/D button once, push (▶) button or (◀) button to straighten the sides of the test pattern or the image.

Tilt Adjustment

With microcomputer control jig:

Press the tilt up button (**18**) or the tilt down button (**19**) to correct the tilt of the display.

Without microcomputer control jig:

Push the G/D button twice to display the tilt OSD. Push either the tilt up (▲) or down (▼) button to display the tilt OSD.
Use the up (▲) and down (▼) buttons again to correct the tilt of the display.

Save the Data

With microcomputer control jig:

To save the picture data for a mode, push the mode save button (**5**).

Degauss

Without microcomputer control jig:

Magnetic fields can build up on the CRT and cause color impurity. Use the degauss button to demagnetize the CRT. Push the button once to activate the degaussing circuit. The degaussing circuit automatically turns itself off after a few seconds.

To Delete the User Mode Data

With microcomputer control jig:

To delete the picture data of user's mode, push user's mode delete button (**20**).

Without microcomputer control jig:

To delete the picture data of user's mode, press the degaussing button for 5 or more seconds.

6-5 Color Adjustments

Note: To make color adjustments you must have one of the following configurations:

1. Micom Control Jig and Signal Generator.
   or
2. Micom Control Jig and Computer and Samsung DM 200 software or DisplayMate for Windows software from Sonera Technologies.

Before making adjustments check that the video signals are as follows:

Video : Analog 0.714 Vp-p (at 75 Ω terminated).
Sync : Synchronizing: Separate TTL level.
Unless otherwise specified, use 1024x768 signal (60 kHz/75 Hz) for the adjustments.

6-5-1 Color Adjustments for 9300°K

6-5-1 (a) Adjustment of the Back Raster Color

(60 kHz/75 Hz, Back raster pattern)

1. Turn the contrast and the brightness controls fully clockwise (Maximum condition).
2. Adjust the screen VR of the FBT so that the brightness of back raster is 0.5 to 0.7 ft-L (Typically 0.6 ft-L).
3. Press button **8** to download the standard color data (channel 1) from the micom jig.

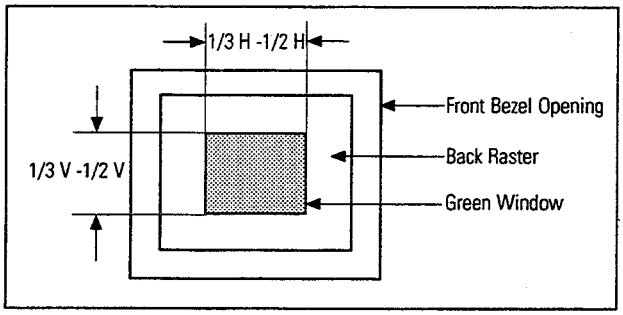
   (For 9300° K color adjustment:
   x = 0.283±0.02, y = 0.298±0.02.

   For 6500° K color adjustments see section 6-5-2 "Color Adjustments for 6500° K."
4. Use buttons **26** and **27** to set the "y" coordinate to 0.298±0.02.
5. Use buttons **16** and **17** to set the "x" coordinate to 0.283±0.02.
   Note: If the above adjustments cannot be done to each coordinate, press button **21** to increase the green bias, or button **22** to decrease the green bias and repeat procedures 4 and 5.
6. After completing the adjustments, press button **5** to save the data.

6-5-1 (b) Video Gain Adjustment

(60 kHz/75 Hz, Green box pattern)

1. Display the green window pattern using a range for which the ACL Circuit is not active (within ranges 1/3 to 1/2H and 1/3 to 1/2V).



6-1. Green Box Pattern

2. Turn the contrast and the brightness controls fully clockwise.
3. Press buttons **6** and **7** (G-Gain control) to adjust the brightness of the green gain to 40±1 ft-L. (Typically 38 ft-L)

   Note: If you can't increase the green gain to the appropriate value, press button **3** to increase the ACL point.

6-5-1 (c) White Balance Adjustment

(60 kHz/75 Hz, Full white Pattern)

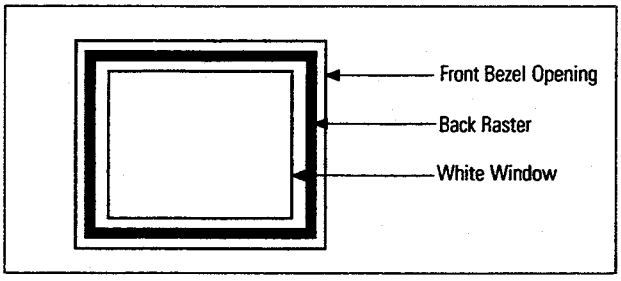


Figure 6-2. Full White Pattern

1. Turn the contrast and the brightness controls fully clockwise.

2. Press buttons **11** and **12** and buttons **1** and **2** to make the video white.
(For 9300° K color adjustment:
x = 0.283±0.02, y = 0.298±0.02.)

   Note: Do not touch buttons **6** and **7**.

3. Press button **5** to save the data.

6-5-1 (d) White Balance Fine Adjustment

(x = 0.283±0.02, y = 0.298±0.02,
Full White pattern)

Note: Do not touch buttons **6** and **7** (G-Gain).

1. Adjust the contrast control so that the brightness of the video is about 5 ft-L.
2. Check whether the white coordinates of the video meets the above coordinate spec.
3. Adjust the contrast control so that the brightness of the video is about 20 ft-L.
4. Check whether the white coordinates of the video satisfies the above spec.
5. If the white balance differs from the above spec, readjust it to within specifications. When correct, press buttons **5** to save.

6-5-1 (e) ACL point Adjustment

1. Display the full white pattern.
2. Turn the contrast and the brightness controls fully clockwise.
3. Press buttons **3** and **4** (ACL) so that the brightness is 30 ±1 ft-L.
4. Press button **10** to save the ACL setting value.

6-5-2 Color Adjustments for 6500°K

6-5-2 (a) Back Raster Color Adjustment

1. Display the back raster pattern.
2. Turn the contrast and the brightness controls fully clockwise.
3. Press button **9** to load the standard color data for 6500°K from micom control jig.
4. Adjust the brightness of the back raster to set 0.5 to 1.0 ft-L and press button **21** or **22** (G-Bias control). If you don't need to adjust the brightness, skip this step.

   Note: For 6500° K adjustments you must not control the screen VR of the FBT. If you do so, the 9300°K setting values are changed.

5. Using buttons **26, 27, 16** and **17,** adjust the R-Bias to x = 0.313±0.02, B-Bias to y=0.329±0.02.
6. Press button **5** to save the bias data for 6500°K.

6-5-2 (b) Video Gain Adjustment

1. This procedure is the same as that of 9300°K.
2. Refer to the procedure for 9300°K on page 6-6.

6-5-2 (c) White Balance Adjustment

1. Display a full white pattern.
2. Turn the contrast and the brightness controls fully clockwise.
3. Using buttons **11, 12, 1** and **2,** set the R/B gain data to x= 0.313±0.02, y=0.329±0.02.

6-5-2 (d) White Balance Fine Adjustment

Refer to the procedure for 9300°K on page 6-7.

6-5-2 (e) ACL Point Adjustment

Refer to the procedure for 9300°K on page 6-7.

6-6 Focus Adjustment

1. Display the H character pattern so that the focus adjustment can be done. (Apply 1280x1024/60 Hz mode to the monitor.)
2. Turn the contrast and the brightness controls fully clockwise.
3. Adjust the focus control of the FBT to display the sharpest image possible.

6-7 CRT Tilt Adjustment

Reassemble the CRT with fastening screws so that the dimensions A, B and C, D are separately equal.

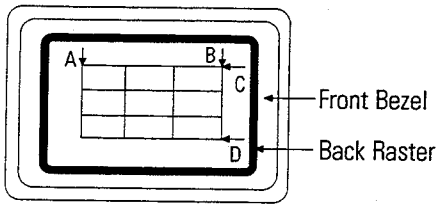


Figure 6-3. CRT Tilt Adjustment

6-8 Purity Adjustment

Note: Color purity adjustments are not available for monitors using Hitachi CRTs.

Use the following procedure to correct minor color purity problems:

1. Make sure the display is not affected by external magnetic fields.
2. Very carefully break the glue seal between the two-pole purity convergence magnets (PCM) and the convergence bow magnets (see figure 6-12).
   Caution: The convergence bow magnets are not user or service technician adjustable. Do not allow these magnets to move.
   Also break the seal between the two PCMs.
3. Make sure the spacing between the PCM assembly and the CRT stem is 29 mm±1 mm.
4. Display a red pattern over the entire display area.
5. Adjust the purity magnet rings on the PCM assembly to display a pure red pattern. (Optimum setting: X=0.625±0.015, Y=0.340±0.015)
6. Adjust each corner and the center to meet the red color tolerances listed below.
7. Repeat steps 4 through 6 using a green pattern and again, using a blue pattern.

Table 6-2. Color Purity Tolerances

Red:	X=0.625±0.015	Y=0.340±0.015
Green:	X=0.275±0.015	Y=0.605±0.015
Blue:	X=0.150±0.015	Y=0.065±0.015

(For 9300°K color adjustment: X=0.283±0.02, Y=0.298±0.02)

8. When you have the PCMs properly adjusted, carefully glue them together to prevent their movement during shipping.

6-9 Convergence Bow Adjustment

Convergence bow adjustments are not available for any of the CRTs used in the SyncMaster 17GLi monitors. While the Hitachi CRTs have convergence bow magnets, they are sealed in the CRT factory and are not user or service technician adjustable. Do not touch these magnets (see Figure 6-11). Phillips CRTs do not have convergence bow magnets, and, therefore, no convergence bow adjustments are available. If color convergence bow adjustment is out of alignment, replace the CRT.
Bow misconvergence should not exceed the values listed in table 6-3:

Table 6-3. Bow Misconvergence Tolerances

Position	Error in mm	CRT Dot Pitch	Remark
Center	0.3	0.28	—
Edge	0.35	0.28	Above 800x600 resolution
	0.45	0.28	Below 800x600 resoultion

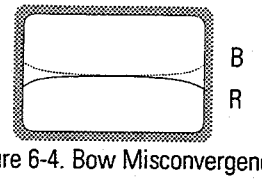


Figure 6-4. Bow Misconvergence

6-10 Static (Center) Convergence

Switch the monitor on and warm it up for 15 minutes. Display a crosshatch pattern on the screen. Convergence errors should not exceed the values listed below.

Table 6-4 Convergence Error Tolerances

Position	Error in mm	CRT Dot Pitch	Remark
Center	0.3	0.28	——
Corner	0.35 0.45	—— ——	Above 800x600 resoultion Below 800x600 resoultion

As shown in Figures 6-11 the two CRTs used in SyncMaster 17GLi monitors use the following magnet configurations:

Table 6-5. Magnet Configurations

CRT Manufacturer	Magnet Order from Front of CRT
Hitachi	Convergence bow, two-pole, four-pole, six-pole

Use the following steps to correct any static misconvergence:

1. Locate the pair of four-pole magnet rings.
2. Unlock the rings and rotate the individual rings (change the spacing between tabs) to converge the vertical red and blue lines.
3. Rotate the pair of rings (maintaining the spacing between tabs) to converge the horizontal red and blue lines.
4. After completing the red and blue center convergence adjustment, locate the pair of 6-pole magnet rings.
5. Rotate the individual rings (change the spacing between tabs) to converge the vertical red and blue (magenta) and green lines.
6. Rotate the pair of rings (maintaining the spacing between tabs) to converge the horizontal red and blue (magenta) and green lines. Don't rotate the 2-pole magnet because it is for purity adjustments.
7. Mark the correct position for the magnets and apply a small line of glue to hold the magnets in place. Lock the rings in place.

6-10-1 Alignment of Red and Blue with the 4-pole magnet

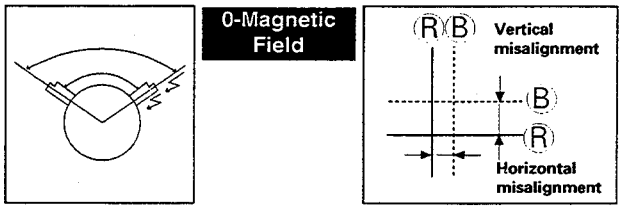


Figure 6-5. Movable in Spread Condition

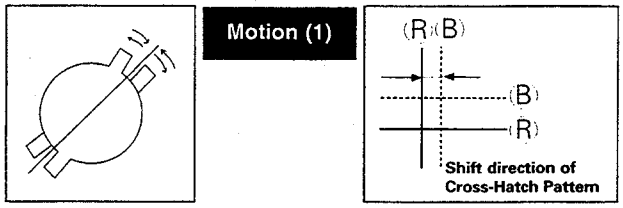


Figure 6-6. Vertical Direction

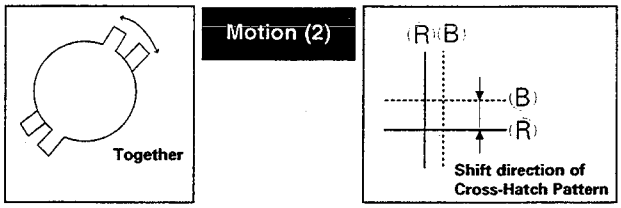


Figure 6-7. Horizontal Direction

6-10-2 Alignment of Red, Blue and Green with the 6-pole magnet

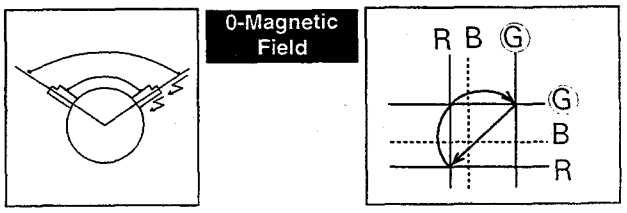


Figure 6-8. Movable in Spread Condition

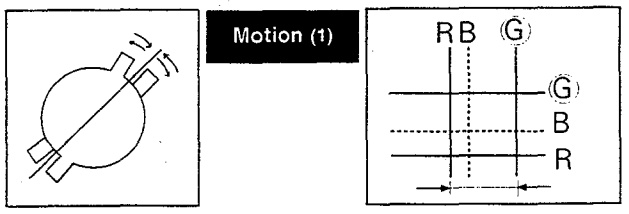


Figure 6-9. Vertical Direction

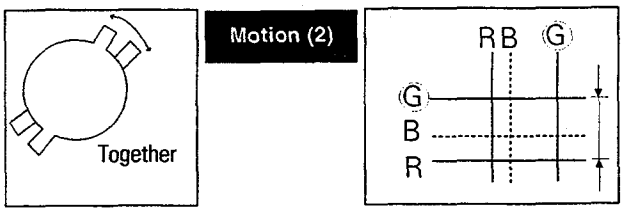


Figure 6-10. Horizontal Direction

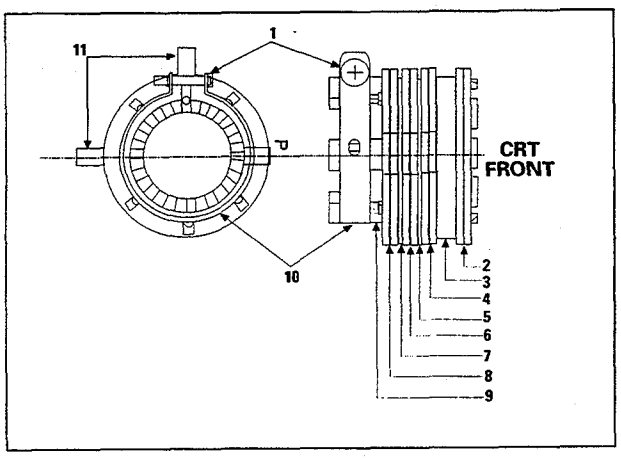


Figure 6-11. Hitachi Magnet Configuration

HITACHI CRT			
1 Setup Bolt	2 Bow Magnet	3 Band	4 2-Pole Magnet
5 Spacer	6 4-Pole Magnet	7 Spacer	8 6-Pole Magnet
9 Holder	10 Band	11 Tabs	

6-11 Dynamic (Edge) Convergence

Use the following procedure to correct minor dynamic (edge) misconvergence. If, after using this procedure, dynamic misconvergence is still greater than the 0.4 mm tolerance around the periphery of the display area, replace the CRT.

1. Make sure the display is not affected by external magnetic fields.
2. Make sure the static convergence is properly adjusted.
3. Strategically place small magnetic strips on the back of the CRT to correct the misconvergence. Be careful not to remove the paper protecting the adhesive on the magnetic strip until you are satisfied with their placement and the dynamic convergence.
4. When you are satisfied with the convergence around the edge of the CRT, permanently glue the magnets to the back of the CRT.

Table 6-5. Magnetic Strips

Description	Size	Code Number
Magnet Sheet	5 mm x 80 mm	937 319004CA
Magnet Sheet	10 mm x 80 mm	937 319004AA

Warning

Do not remove the factory installed wedges. These wedges were installed by the CRT manufacturer and are properly placed for this CRT. Removal may result in damage to the CRT.

Memo

7 Display Performance

This section of the service manual describes the parameters for optimum screen quality.

7-1 Display Area

The display area is the entire area available to display an image. It spans from one edge of the CRT screen to the other edge.

Width : 287.5 ± 3 mm (5:4 Format), 306 ± 3 mm (4:3 Format).
Height: 230 ± 3 mm.

7-2 Centering

Centering means to position the center point of the display in the middle of the display area. Horizontal size and position and vertical size and position control the centering of the display.

Adjust the horizontal size and vertical size to their optimal settings: 306 mm (H) x 230 mm (V)

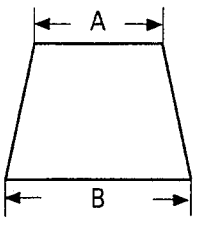
Adjust the horizontal position and vertical position to ≤4.0 mm of the center point of the screen.
$|A - B| \leq 4.0$ mm.
$|C - D| \leq 4.0$ mm.

7-3 Distortion

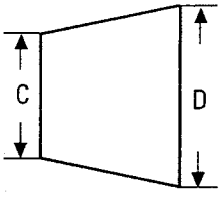
Distortion refers to the geometric shape of the display. The corner angles of the display should be 90 degrees. Adjust the trapezoid, parallelogram and pincushion distortions to below the maximum tolerances.

7-3-1 Trapezoid

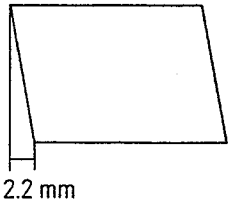
$|A - B| < 2.2$ mm



$|C - D| < 2.2$ mm

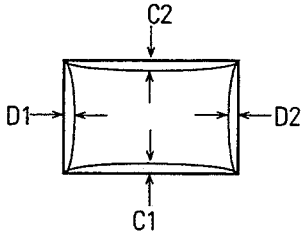


7-3-2 Parallelogram



7-3-3 Pincushion

$|C1|, |C2| \leq 2.2$ mm,
$|D1|, |D2| \leq 2.2$ mm.



7-4 Linearity

Linearity affects the symmetry of images displaying on the screen. Unless each row or column of blocks in a crosshatch pattern is of equal size, or within the tolerances shown in Tables 7-1 and 7-2 an image appears distorted, elongated or squashed.

To adjust the linearity to its optimum setting, refer to the appropriate table.

7-4-1 Conditions

Display image: Crosshatch pattern with 16 blocks horizontally and 12 blocks vertically.
Maximum and minimum values should not be adjacent to each other.

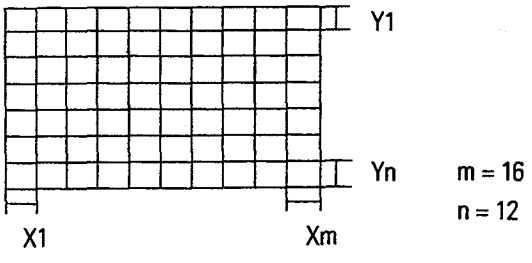


Table 7-1. Standard Mode Linearity: 37.5 kHz/75Hz, 46.875 kHz/75 Hz

Standard Mode	Factory Preset Timing Modes	
	Each block (5%)	Difference between adjacent blocks (4%)
640x480/75 Hz 800x600/75 Hz 1024x768/75 Hz	Horizontal: 18.2 ~ 20.1 Vertical : 18.2 ~ 20.1	Horizontal: Less than 0.8 mm Vertical : Less than 0.8 mm

Table 7-2. Other Modes Linearity: VGA, 8514/A, XGA, MAC, etc.

Screen Ratio	Supported Timing Modes	
	Each block (7%)	Difference between adjacent blocks (5%)
4 : 3	Horizontal : 17.8 ~ 20.5 Vertical : 17.8 ~ 20.5	Horizontal: less than 1.0 mm Vertical : less than 1.0 mm
5 : 4	Horizontal : 16.7 ~ 19.2 Vertical : 17.8 ~ 20.5	Horizontal: less than 0.9 mm Vertical : less than 1.0 mm

7-5 Luminance Uniformity

Luminance uniformity means that the luminance at the position of the lowest brightness must be more than 70% of the luminance at the area with the highest brightness. Luminance is considered uniform only if the ratio of lowest to highest brightness does not exceed 7:10.

Table 7-3. Computing Luminance Uniformity

Value	70 % (Min) Variation = $\frac{A}{C}$ x 100
Conditions	Display Image : White flat field. Luminance : Brightness cut off, Contrast Max. A : Luminance at position of highest brightness. C : Luminance at position of lowest brightness.

7-6 Color Coordinates (Temperature)

Color temperature is a measure of the radiant energy transmitted by a color. For computer monitors, the color temperature refers to the radiant energy transmitted by white. Color coordinates are the X and Y coordinates on the chromaticity diagram of wavelengths for the visible spectrum.

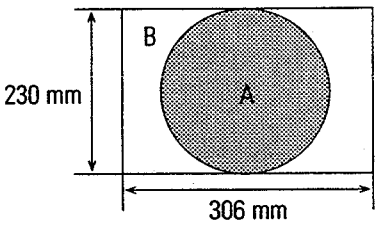
Table 7-4. Color Coordinates

Value'	9300° K : x =0.283±0.02, y =0.298±0.02. 6500° K : x =0.313±0.02, y =0.329±0.02.
Conditions	Display Image : White flat field at the center of display area. Luminance : Min : 5 ft-L, Max : 24 ft-L.

7-7 Misconvergence

Misconvergence occurs when one or more of the electron beams in a multi beam CRT fail to meet the other beams at a specified point, such as at an opening in the shadow mask.

Center area of display : (A) < 0.3 mm
Peripheral area of display :
(B) < 0.35 mm above 800x600 resoultion
(B) < 0.45 mm below 800x600 resoultion



Conditions
Display Image: Crosshatch pattern mixed with RGB colors.

7-8 Color Purity

Color purity is the absence of undesired color. Conspicuous mislanding (unexpected color in a uniform field) within the display area shall not be visible at a distance of 50 cm from CRT surface.

Conditions

Display image: White flat field.
Luminance : 15 ft-L at the center of display area.

Memo

8 List of Abbreviations and Acronyms

The list of abbreviations is described in the table below.

8-1 Abbreviations

Table 8-1. Abbreviations

Abbv	Definition	Abbv	Definition
amp	amplifier	pF	picofarad
amps	amperes	pix	picture
ass'y	assembly	pos	positive or position
bps	bits per second	pot	potential
cm	centimeter(s)	pwr	power
con	connector	qty	quantity
ft-L	foot Lamberts	sw	switch
hor	horizontal	sync	synchronous or synchronization
in	inch(es)	tach	tachometer
lb	pound(s)	µF	microfarad
lin	linearity	vert	vertical
mm	millimeter(s)		
mpx	multiplex		
neg	negative		
osc	oscillator		
pba	printed board assembly		
pcb	printed circuit board		

8-2 Acronyms

Table 8-2. Acronyms

Acronym	Definition	Acronym	Definition
ABL	Automatic Brightness Limit	MTBF	Mean Time Between Failures
AC	Alternating Current	OSC	Oscillator
ACL	Automatic Contrast Limit	OSD	On Screen Display
ADC	Analog to Digital Converter	PCM	Purity Convergence Magnet
AMP	Amplifier	PIO	Parallel Input Output
CAD	Computer Aided Design	PLL	Phase-Locked Loop
CAM	Computer Aided Manufacturing	PWM	Pulse-Width Modulator
CPU	Central Processing Unit	RMS	Root-Mean-Square
CRT	Cathode Ray Tube	SW	Switch
CSA	Canadian Standards Association	SYNC	Synchronization
DAC	Digital to Analog Converter	TTL	Transistor-Transistor Logic
DCC	Direct Communication Channel	UL	Underwriters Laboratory
DDC	Display Data Channel	VAGI	VESA Advanced Graphics Interface
DPMS	Display Power Management Signaling	VBE/PM	VESA BIOS Extension Commission/Power Management
DVM	Digital Voltmeter	VDE	Verband Deutscher Elektrotechniker
DY	Deflection Yoke	VESA	Video Electronics Standards Association
EEPROM	Electrically Erasable Programmable Read-Only Memory	VGA	Video Graphics Array
EMI	Electro Magnetic Interference	VOM	Volt-Ohm-Milliammeter
EPROM	Erasable Programmable Read-Only Memory	VR	Variable Resistor
ESD	Electrostatic Discharge	Vp-p	Voltage peak-to-peak
FBT	Flyback Transformer		
FCC	Federal Communications Commission		
FET	Field-Effect Transistor		
IC	Integrated Circuit		
LCD	Liquid Crystal Display		
LED	Light Emitting Diode		
MOSFET	Metal-oxide Semiconductor FET		

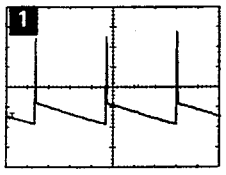
9 Troubleshooting

Notes: 1. If picture does not appear, fully rotate the brightness and contrast controls clockwise before inspection.

2. Check the following circuits:
   - •No raster appears: Power circuit, horizontal output circuit, H/V control circuit and H/V output circuit.
   - •High voltage develops but no raster appears: Video output circuits.
   - •High voltage does not develop: Horizontal output circuits.

WAVE FORMS

1



NO POWER

Does proper AC 90-264 Voltage appear between the positive pole of C605?

No → Check D662, D663, D664, D665, L601 Power Button.

Yes → Check D606, D607, D696, IC601, Q602, Q603, T601 and power circuit.

Horizontal line on raster

Yes

Does DC 14 V appear at pin 2 of IC301?

No → Check the power supply circuits. (D617 and R301)

Yes

Does DC -12V appear at pin 4 of IC301?

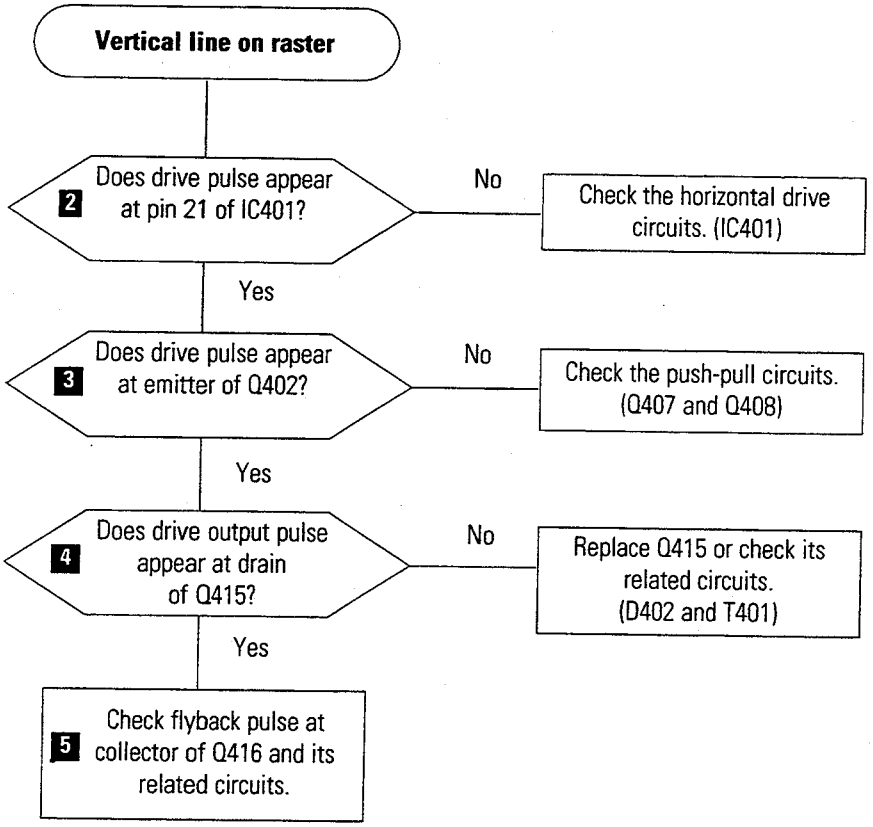
No → Check the power supply circuits. (D620 and R302)

Yes

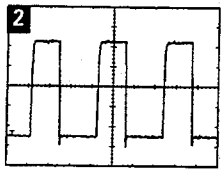
1 Does output pulse of 46 Vp-p appear at pin 5 of IC301?

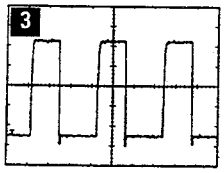
No → Replace IC301 or check its related circuits. (D301, IC301 and R310)

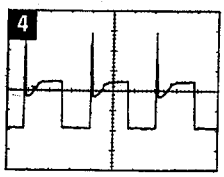
Yes → Check IC301 and its related circuits.

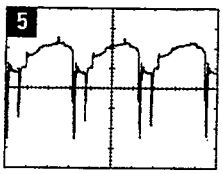

Vertical line on raster
2
Does drive pulse appear at pin 21 of IC401?
No
Check the horizontal drive circuits. (IC401)
Yes
3
Does drive pulse appear at emitter of Q402?
No
Check the push-pull circuits. (Q407 and Q408)
Yes
4
Does drive output pulse appear at drain of Q415?
No
Replace Q415 or check its related circuits. (D402 and T401)
Yes
5
Check flyback pulse at collector of Q416 and its related circuits.

WAVE FORMS


2


3


4


5

No raster

Power indicator is green.

Does the B+ output voltage appear at the secondary side of T601?

No → Check the power supply circuits.

Yes

Does the output pulse appear at the pin 21 of IC401?

No → Check IC401.

Yes

Does the pulse appear at the emitter of Q502?

No → Check Q501,Q502 and Q503.

Yes

Does the pulse appear at the drain of Q503?

Yes → Check horizontal deflection output part.

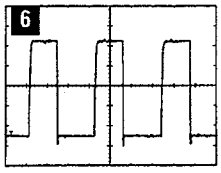
Does the pulse appear at the gate of Q503?

Yes → Check horizontal deflection output part.

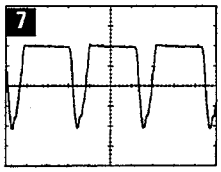
No → Check Q501, Q503 and Q505.

WAVE FORMS

6



7



Power indicator is orange.

Does H/V sync pulse appear at pins 27 and 29 of IC201?

No → Check signal cable connection and the signal sources.

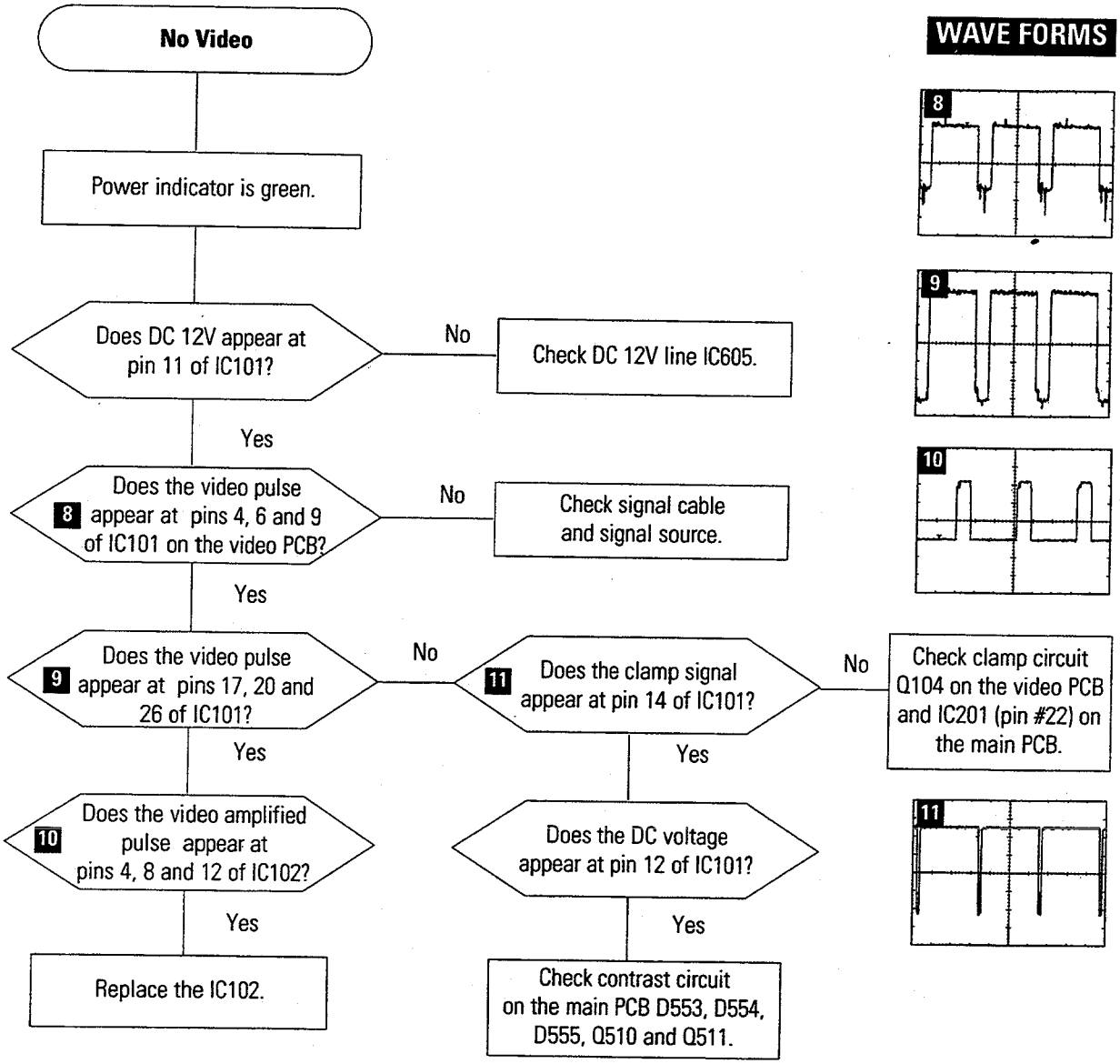
Yes

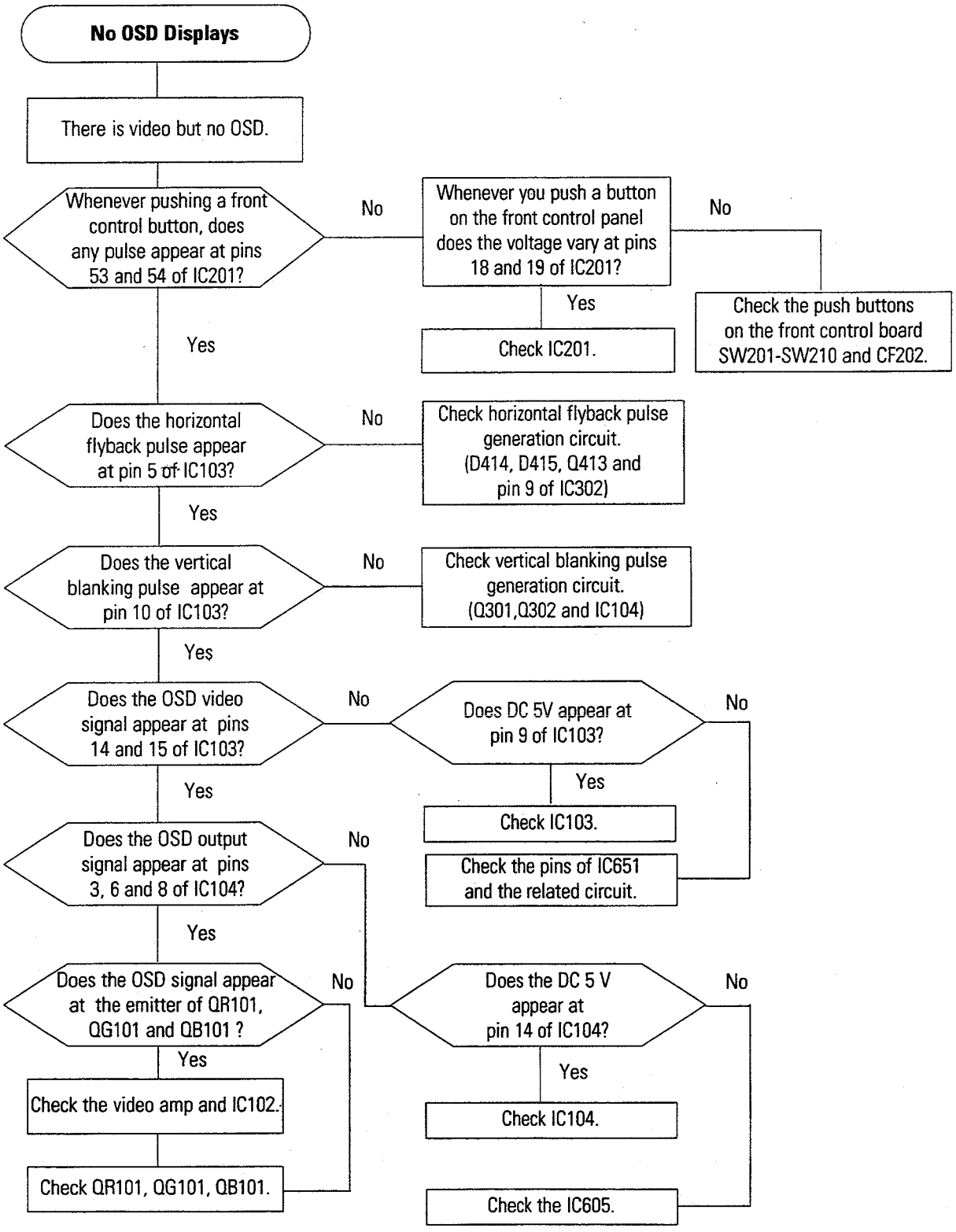
Does H/V sync output appear at pins 26 and 30 of IC201?

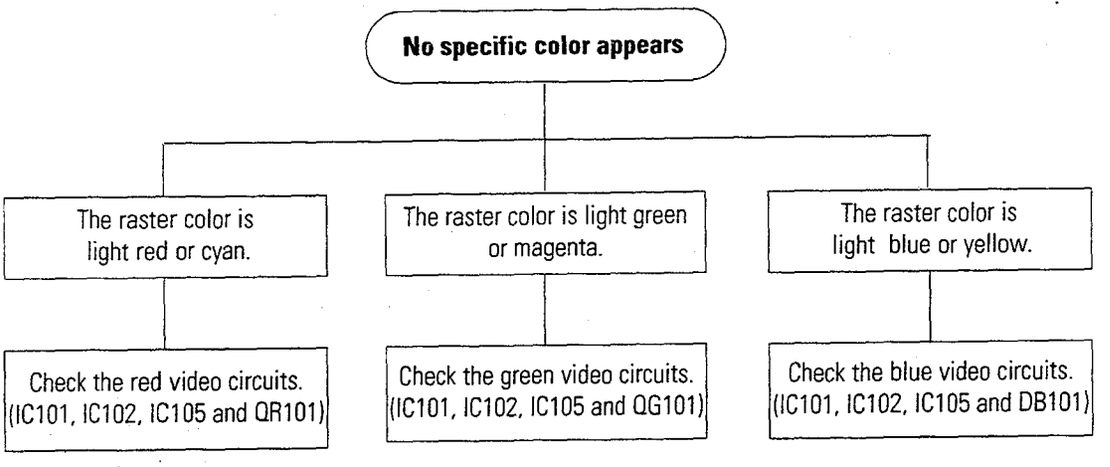
No → Check MICOM and IC201.

Yes

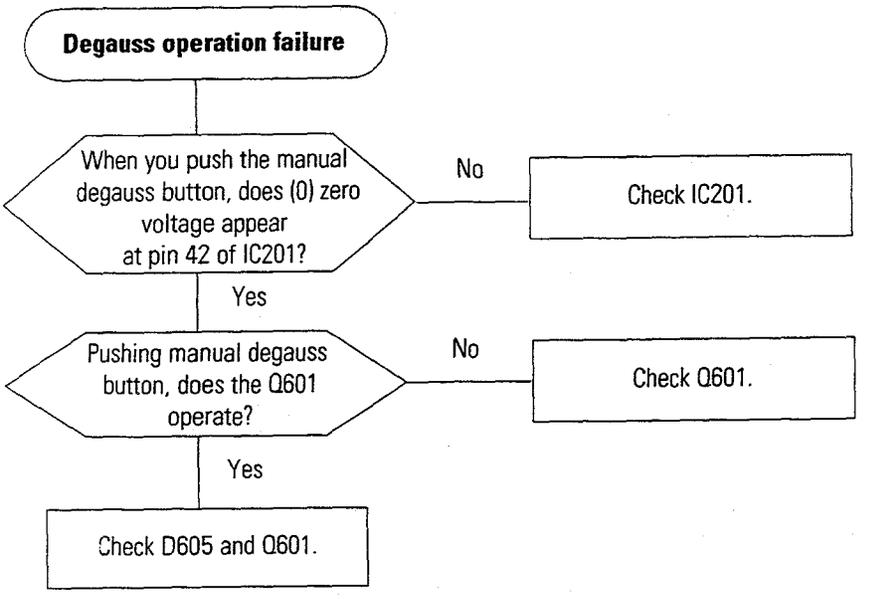
Check IC401.


No Video
Power indicator is green.
Does DC 12V appear at pin 11 of IC101?
No
Check DC 12V line IC605.
Yes
Does the video pulse 8 appear at pins 4, 6 and 9 of IC101 on the video PCB?
No
Check signal cable and signal source.
Yes
Does the video pulse 9 appear at pins 17, 20 and 26 of IC101?
No
Does the clamp signal 11 appear at pin 14 of IC101?
No
Check clamp circuit Q104 on the video PCB and IC201 (pin #22) on the main PCB.
Yes
Yes
Does the video amplified 10 pulse appear at pins 4, 8 and 12 of IC102?
Does the DC voltage appear at pin 12 of IC101?
Yes
Yes
Replace the IC102.
Check contrast circuit on the main PCB D553, D554, D555, Q510 and Q511.
WAVE FORMS
8
9
10
11


No OSD Displays
There is video but no OSD.
Whenever pushing a front control button, does any pulse appear at pins 53 and 54 of IC201?
No
Whenever you push a button on the front control panel does the voltage vary at pins 18 and 19 of IC201?
No
Yes
Check IC201.
Check the push buttons on the front control board SW201-SW210 and CF202.
Yes
Does the horizontal flyback pulse appear at pin 5 of IC103?
No
Check horizontal flyback pulse generation circuit. (D414, D415, Q413 and pin 9 of IC302)
Yes
Does the vertical blanking pulse appear at pin 10 of IC103?
No
Check vertical blanking pulse generation circuit. (Q301,Q302 and IC104)
Yes
Does the OSD video signal appear at pins 14 and 15 of IC103?
No
Does DC 5V appear at pin 9 of IC103?
No
Yes
Check IC103.
Check the pins of IC651 and the related circuit.
Yes
Does the OSD output signal appear at pins 3, 6 and 8 of IC104?
No
Yes
Does the OSD signal appear at the emitter of QR101, QG101 and QB101 ?
No
Does the DC 5 V appear at pin 14 of IC104?
No
Yes
Check IC104.
Check the IC605.
Yes
Check the video amp and IC102.
Check QR101, QG101, QB101.


No specific color appears
The raster color is light red or cyan.
The raster color is light green or magenta.
The raster color is light blue or yellow.
Check the red video circuits. (IC101, IC102, IC105 and QR101)
Check the green video circuits. (IC101, IC102, IC105 and QG101)
Check the blue video circuits. (IC101, IC102, IC105 and DB101)

Note: Removing the signal cable displays a self raster screen. This screen displays the message "check signal cable" along with red, green and blue boxes. Use these boxes to check whether each individual color (R, G, B) is operating or not.


Degauss operation failure
When you push the manual degauss button, does (0) zero voltage appear at pin 42 of IC201?
No
Check IC201.
Yes
Pushing manual degauss button, does the Q601 operate?
No
Check Q601.
Yes
Check D605 and Q601.

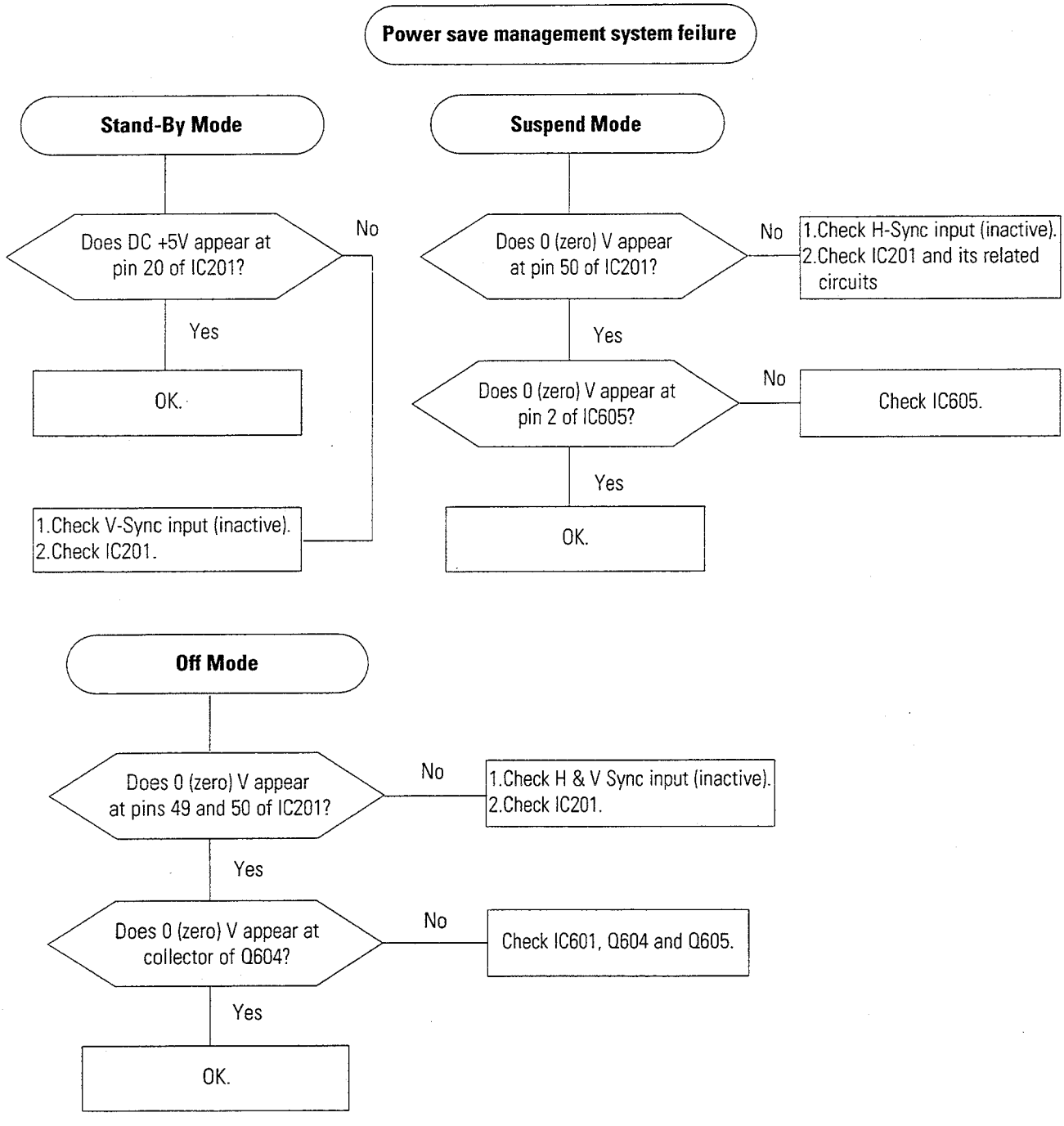


Table 9-2. DPMS Logic Table

Mode	SYNC		Video	LED Color
	H	V		
Normal	Active	Active	Active	Green
Stand-By	Inactive	Active	Blank	Orange
Suspend	Active	Inactive	Blank	Orange/Green blinking
Off	Inactive	Inactive	Blank	Orange blinking

Note: If signal cable is removed, DPMS function does not operate and a self raster displays.

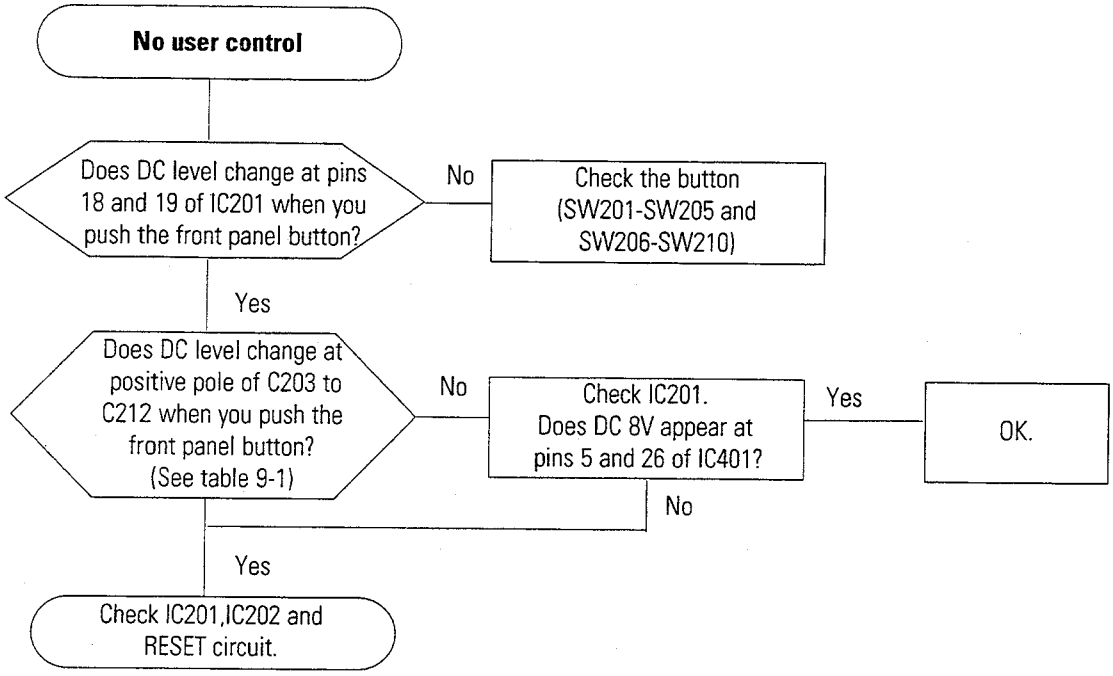
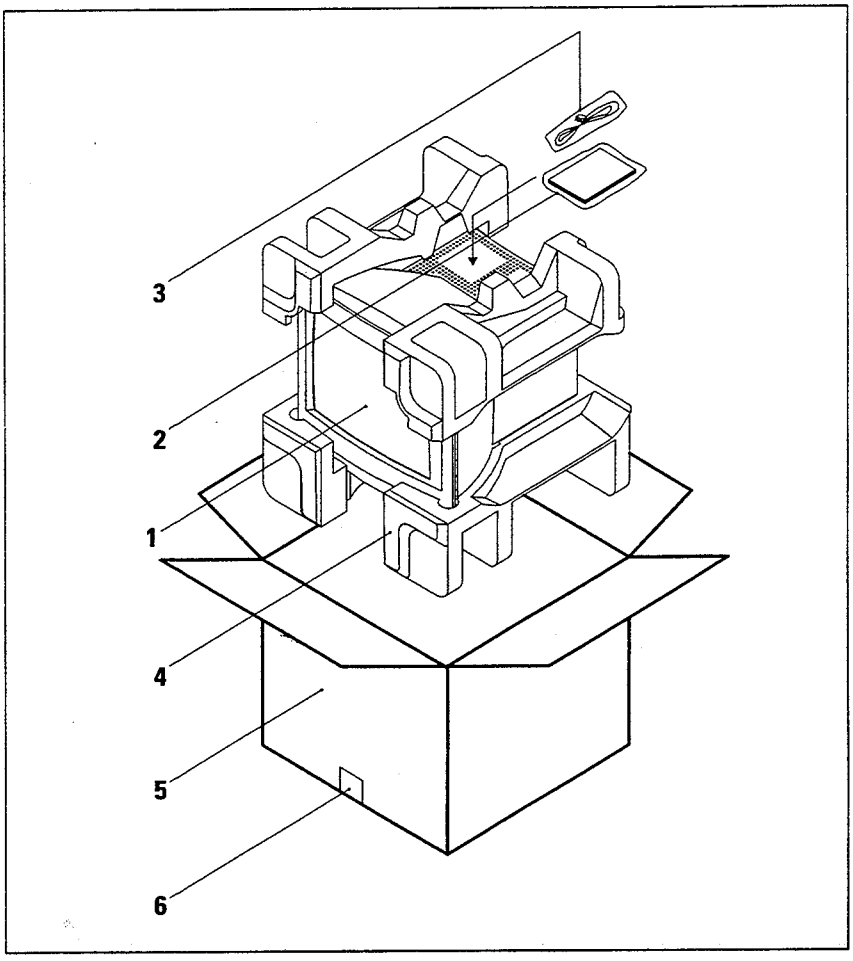

No user control
Does DC level change at pins 18 and 19 of IC201 when you push the front panel button?
No
Check the button (SW201-SW205 and SW206-SW210)
Yes
Does DC level change at positive pole of C203 to C212 when you push the front panel button? (See table 9-1)
No
Check IC201. Does DC 8V appear at pins 5 and 26 of IC401?
Yes
OK.
No
Yes
Check IC201,IC202 and RESET circuit.

Table 9-1. Front Panel Button

Location	Function
C203	Pinbalance
C205	Vertical Linearity
C206	Horizontal Size
C207	Vertical Size
C208	Horizontal Position
C209	Vertical Position
C210	Side Pincushion
C211	Trapezoid
C212	Parallelogram

11 Packing Diagram and Parts List

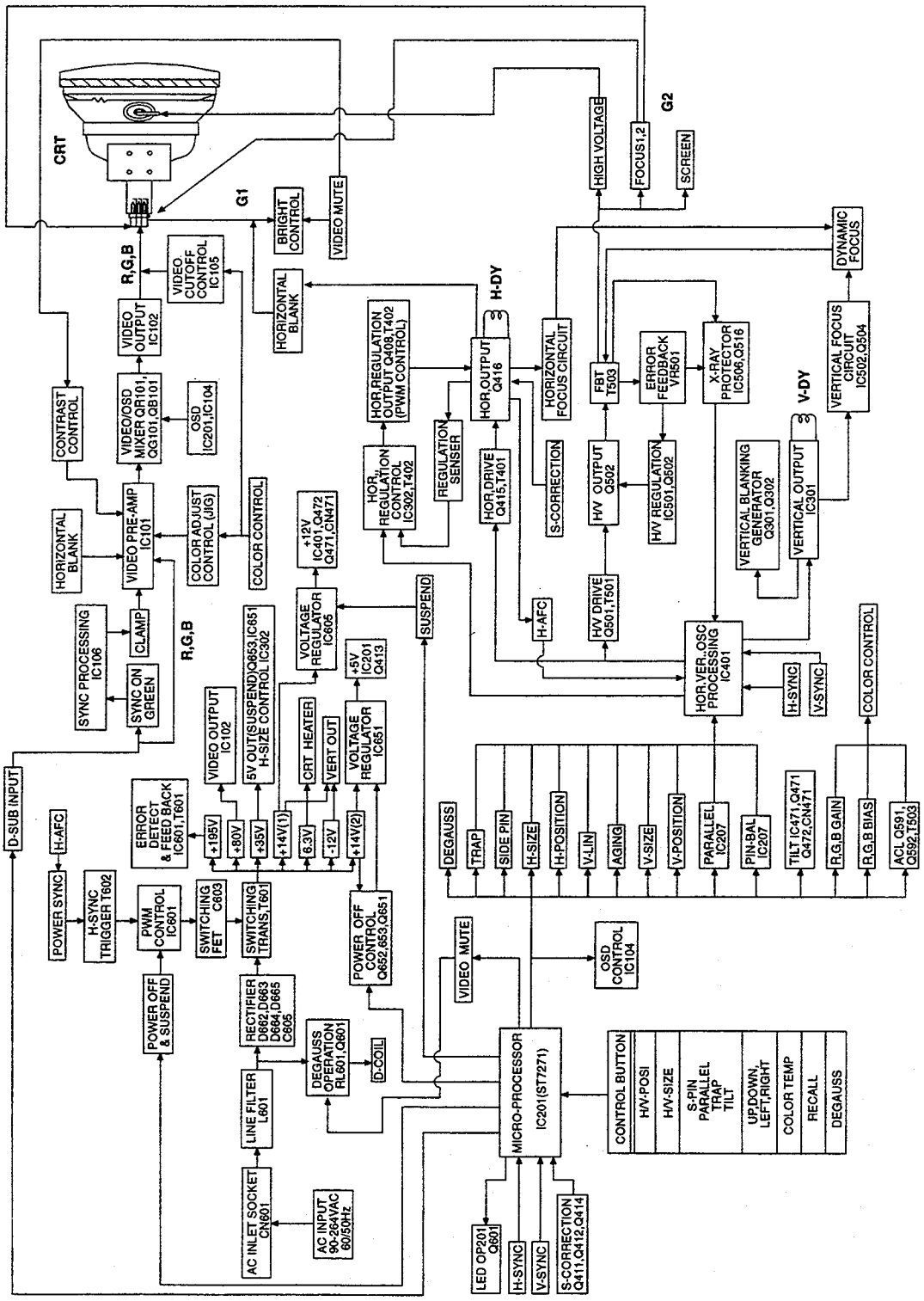


No	Description	Q'TY	Remark
1	MONITOR UNIT	1	
2	USER'S MANUAL	1	
3	POWER CORD	1	
4	CUSHION	1	
5	PACKING CASE	1	
6	MASKING TAPE	1	

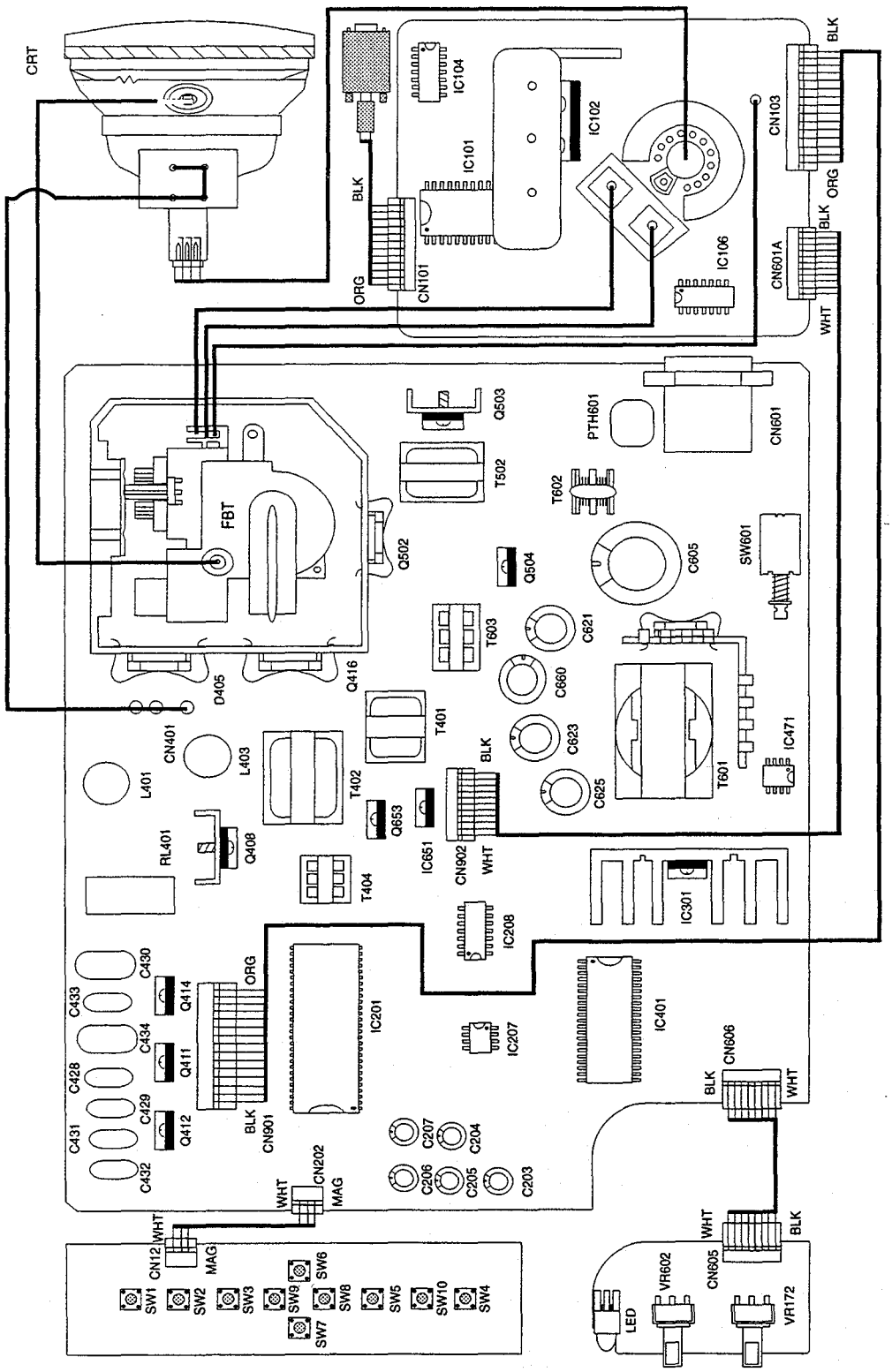
Memo

12 Service Diagrams

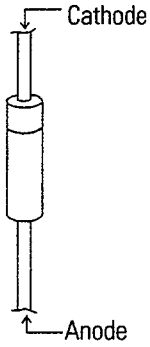
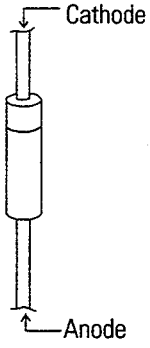
12-1 Block Diagram

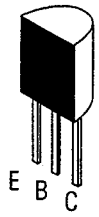
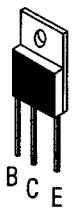
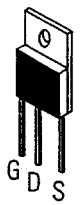
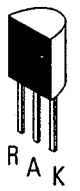


12-2 Wiring Diagram

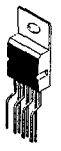
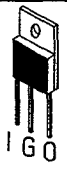
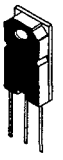
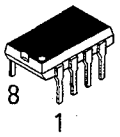
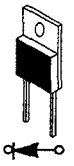
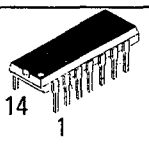
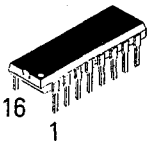
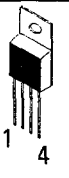
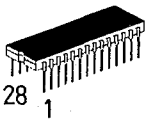
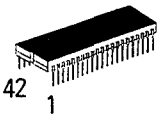
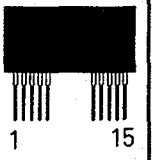


12-3 Semiconductor Lead Identification

PARTS	TYPE NO.	REF. NO.
	1N4148	D101,DB101,DB102,DB103, DB106,DG101,DGG102,DG103, DG106,DR101,DR102,DR103, DR106,D412,D302,D498,D409, D410,D411,D414,D416,D418, D499,D505,D506,D507,D514, D541,D553,D555,D556,D605, D607,D621,D513
	BAV21	DB104,DB105,DG104,DG105, DR104,DR105,D415,D540
	2.7 V ZENER	D554
	5.1 V ZENER	ZD101,D102,D103
	6.2 V ZENER	D201,D202,D203,D204
	8.2 V ZENER	D102
	12 V ZENER	D301,D606
	16 V ZENER	D610
	24 V ZENER	D607
	RGP02-12	D610,D696
	1N4002	D402,D501,D510,D511
	1N4007	D151,D152
	1N4937	D303,D407,D408,D509,D512
	1R5GU41	D618
	UF4001	D651
	1R5NU41	D609
	UF5404	D417,D612,D613,D615,D616, D617,D619,D620,D641
	1N5399GP	D662,D663,D664,D665
	1N4001GP	D581,D582
	UF4004	D504
	UF4007	D406,D515

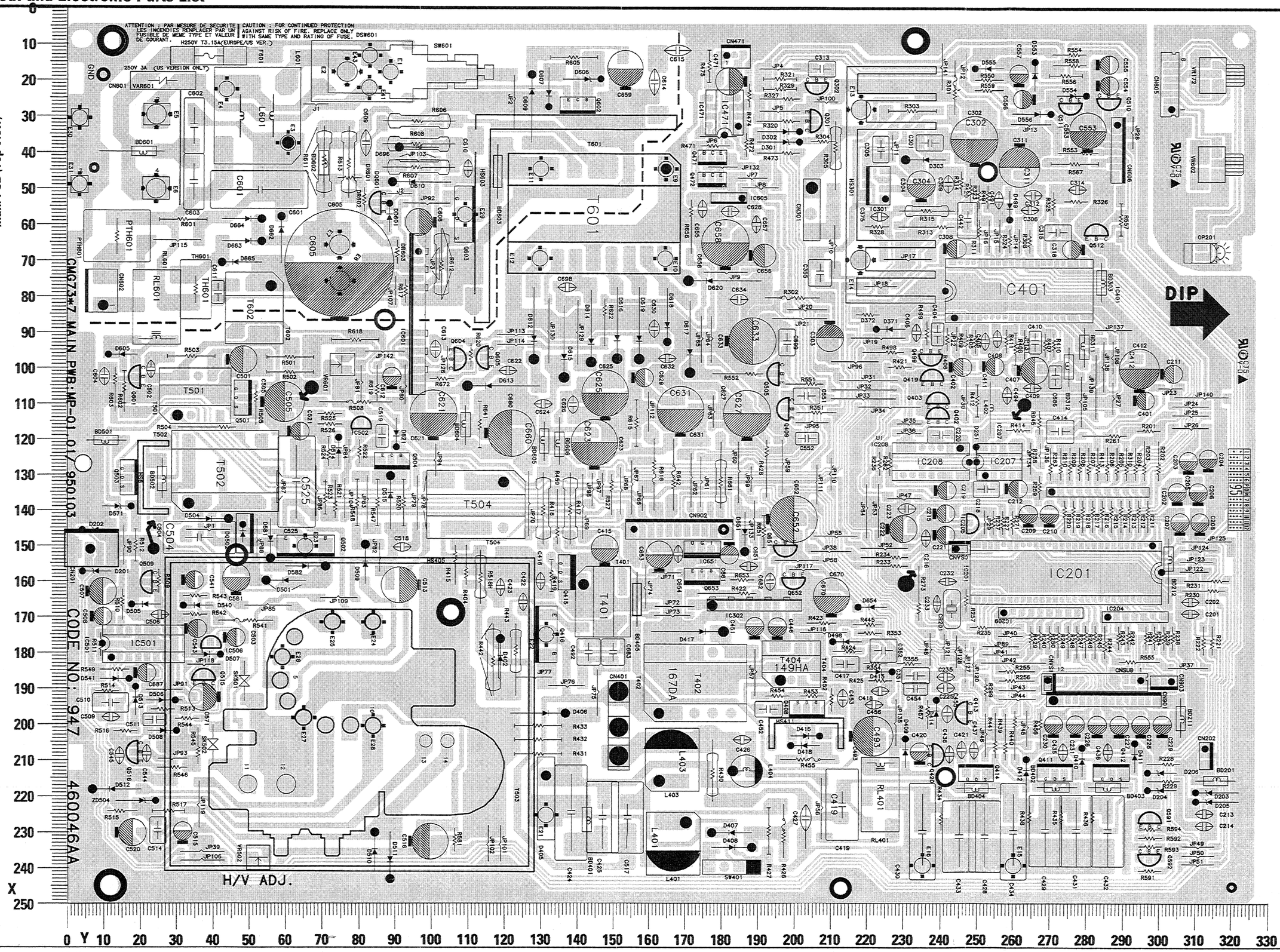
PARTS	TYPE NO.	REF. NO.
	KSC945-Y	Q301,Q302,Q402,Q409,Q419, Q505,Q512,1Q604,Q605,Q651, Q652
	KSA733-Y	Q403,Q509,Q510,Q511
	MPS3646	Q102
	KSC1008	Q420,Q601
	2N3904	Q103,Q104,Q413,Q591,Q592
	2N3906	Q101,Q516
	MPS2222	Q515
	KC3503	Q410,Q602
	KSC3953	QR101,QG101,QB101
	KSB772	Q471
	KSD882	Q472
	KSA614	Q653
	TIP29	Q602
	C3675	Q504
	IRF610	Q415, Q501
	IRF640	Q411, Q412, Q414
	IRF640	Q408, Q503
	KA431	IC502, IC506

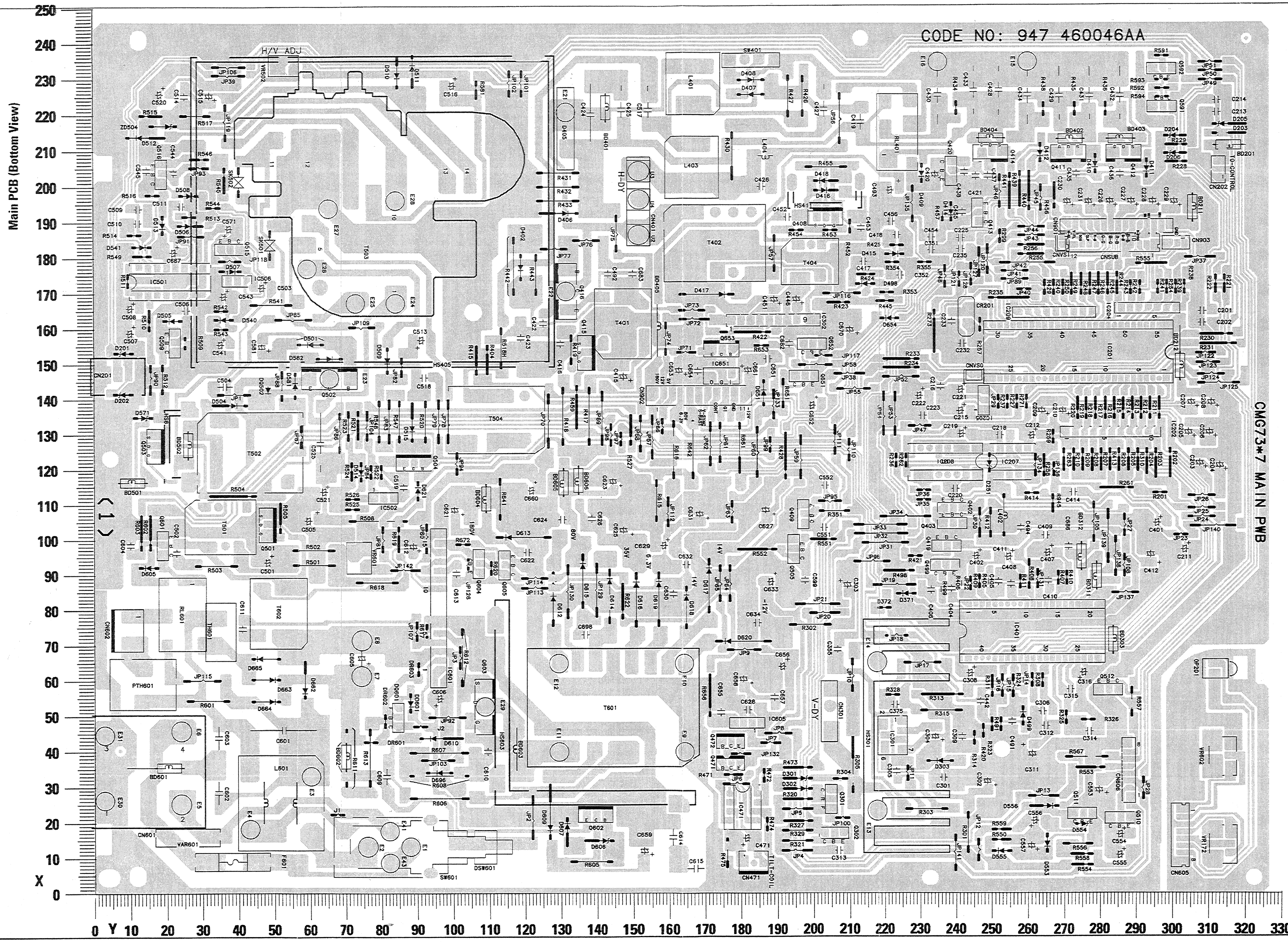
12-3 Semiconductor Lead Identification

PARTS	TYPE NO.	REF. NO.	PARTS	TYPE NO.	REF. NO.
	KIA7045P	IC205		TDA8172	IC301
	MC7805 MC7905	IC604 IC107		2SK1358	D603
	KA3882 KA4558	IC601 IC471		5THZ52	Q405
	74HC125 LM319 MC14066	IC104 IC106 IC208		2SC5129	Q416, Q502
	DLAB494 LXC4320	IC501 IC103		KA78R12	IC605
	LM1207	IC101		CGJ-1	D509
	TDA9103	IC401		HYBRID-IC (CUTOFF- CONTROL)	IC102
	ST7271A	IC201		SIZE-CONTROL	IC302
	LM2427	IC102		SMPS	IC601

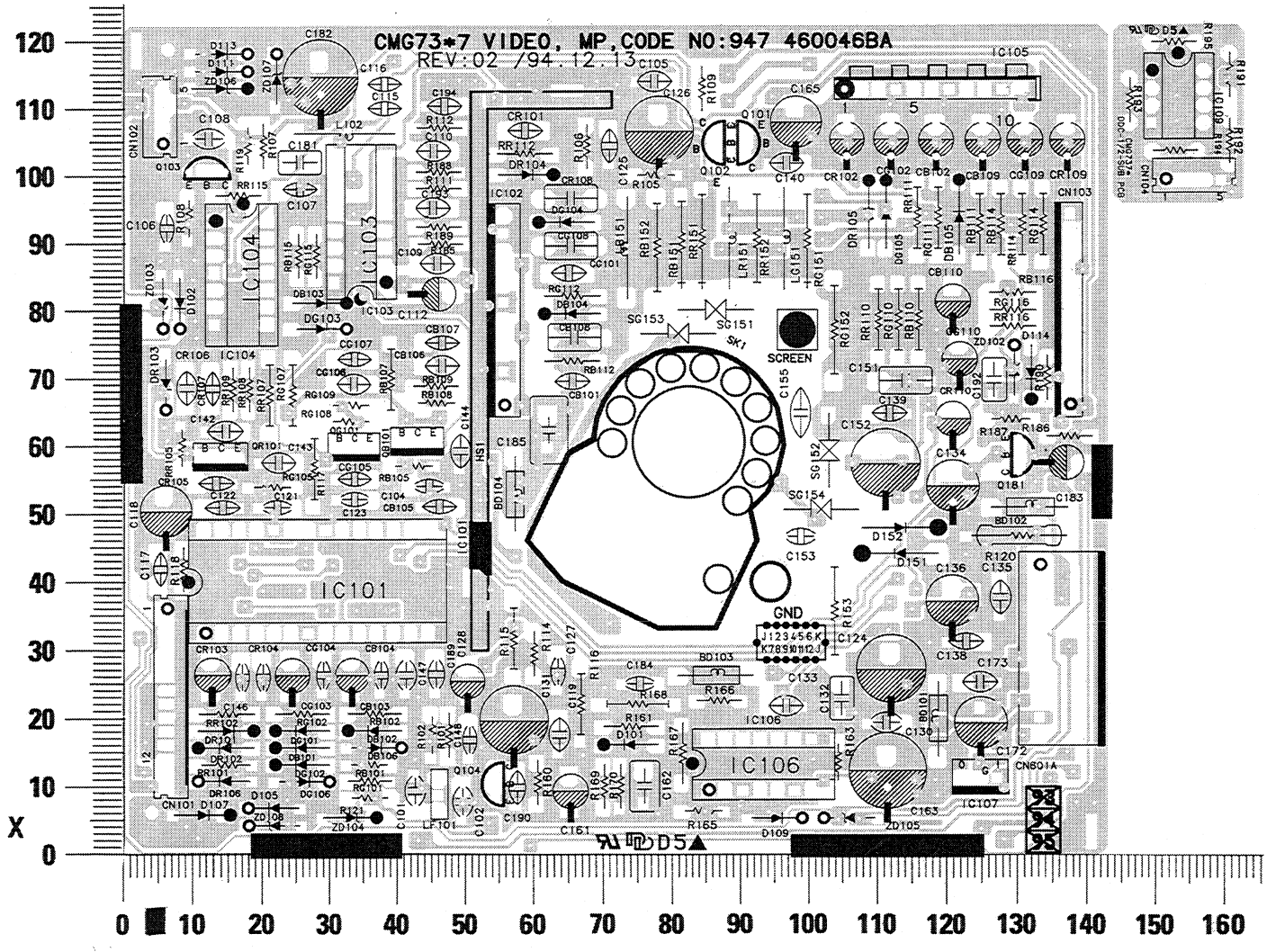
12-4-1 PCB Layout

Main PCB (Top View)

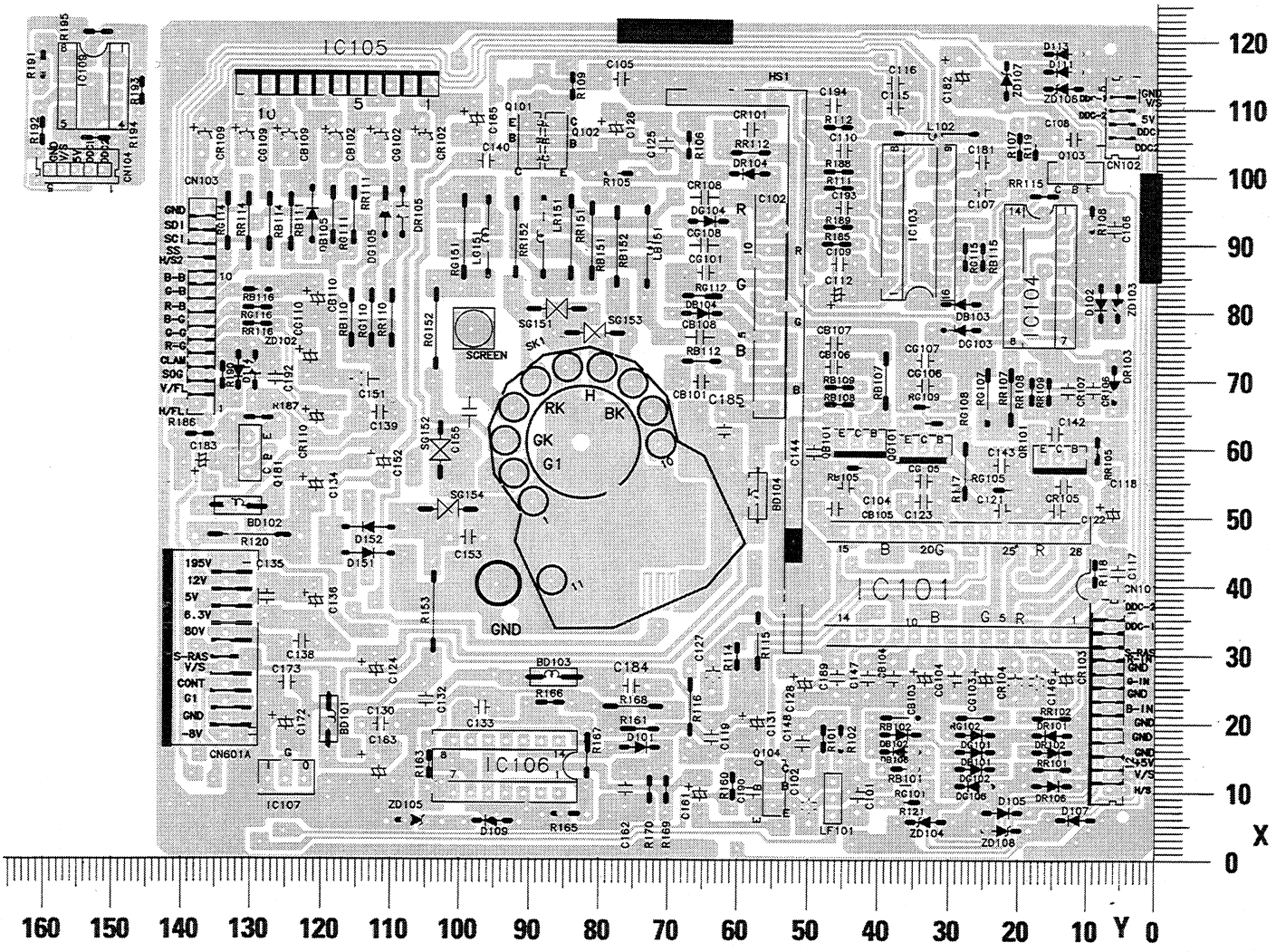



Main PCB (Bottom View)
CODE NO: 947 460046AA
CMG73*7 MAIN PWB
H/V ADJ
H-DY
V-DY
TILT-COIL
TO-CONTROL
X
Y

Video PCB (Top View)



Video PCB (Bottom View)



12-4-2 Electrical Parts List

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
Main PCB Parts						
BD201	211.8	312.9	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD211	188.7	308.7	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD212	144.0	305.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD303	66.8	286.4	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD311	96.0	281.8	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD312	101.5	277.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD401	217.3	144.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD402	217.2	280.1	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD403	217.2	294.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD404	217.3	258.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD405	153.8	158.2	937 120213AA	AM MAG-CORE FERRITE BEAD	ST 02429-048-017	
BD501	117.0	17.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD502	122.1	27.2	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD601	36.3	27.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD602	33.9	71.5	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD603	49.2	119.4	937 120213AA	AM MAG-CORE FERRITE BEAD	ST 02429-048-017	
BD604	118.1	110.9	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD605	122.6	132.6	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD606	123.5	136.8	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
C201	165.1	313.8	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,-,-,Y5P	
C202	161.8	313.8	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,-,-,Y5P	
C203	119.8	310.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C204	119.1	316.1	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C205	128.5	306.7	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C206	128.5	313.3	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C207	136.9	307.5	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C208	136.9	313.8	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C209	134.7	266.5	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C210	134.7	272.3	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C211	97.8	309.2	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C212	130.1	266.2	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C213	221.1	312.8	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C214	224.5	312.8	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C215	137.1	246.2	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C216	146.5	238.2	915 324100HZVH	CAP-CERAMIC,102Z,1H,Y5V	1NF,50V,-20TO80%,-80TO30%,Y5V	
C218	130.2	257.3	916 566220JJAH	CAP-MPETP,224J,1J,5P	(T)63V 224J	
C219	130.6	246.5	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C220	115.1	239.8	916 566220JJAH	CAP-MPETP,224J,1J,5P	(T)63V 224J	
C221	143.1	246.2	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C222	141.4	234.6	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C223	136.1	235.1	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C224	159.4	237.6	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,-,-,Y5P	
C225	188.1	246.3	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C226	196.0	285.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C227	196.0	291.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C228	196.0	297.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C229	195.9	303.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C230	195.9	273.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C231	195.9	279.6	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
C232	156.1	247.0	915 312390HJHH	CAP-CERAMIC,390J,1H,SL	39PF,50V,5%,P350TON1000PPM,SL	
C233	164.8	241.6	915 312390HJHH	CAP-CERAMIC,390J,1H,SL	39PF,50V,5%,P350TON1000PPM,SL	
C235	185.0	246.3	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,-,-,Y5P	
C281	146.5	247.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C301	33.5	236.4	916 566100JJAH	CAP-MPETP,104J,1J,5P	(T)63V 104J	
C302	30.0	251.2	917 864220EMAH	CAP-AL.ELEC,228M.1E,85C	(T)2200UF,25V,20%,R-RADIAL	
C303	90.5	211.6	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C304	42.6	235.0	917 863220FMAH	CAP-AL.ELEC,227M.1V,8X11.5	(T)220UF,25V,20%,R-RADIAL	
C305	37.8	225.6	916 566220JJAH	CAP-MPETP,224J,1J,5P	(T)63V 224J	
C306	52.2	269.1	915 323470HKPH	CAP-CERAMIC,471K,1H,Y5P	470PF,50V,10%,10%,Y5P	
C308	63.0	248.9	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C309	42.5	242.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C311	42.7	263.7	917 863470EMAH	CAP-AL.ELEC,477M.1E,10x12.5	(T)470UF,25V,20%,R-RADIAL	
C312	48.1	270.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C313	12.9	206.6	916 165330LKAH	CAP-MYLAR,333K,2A,5P	(T)100V 333K	
C314	46.5	277.2	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C315	58.4	276.9	916 566270JKAH	CAP-MPETP,274K,1J,5P	270NF,63V 10%,RE-RADIAL	
C316	63.2	275.6	917 120470HM	CAP-AL.ELEC,474M,1H	(T)50V 0.47M	
C351	184.1	233.1	916 565100LKAH	CAP-MPETP,103K,2A,5P	(T)100V 103K	
C352	175.4	229.3	916 567100JKAH	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C355	72.3	208.9	916 567100JKAH	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C375	54.1	227.8	915 324470HKPH	CAP-CERAMIC,472K,1H,Y5P	4.7NF,50V,10%,10%,Y5P	
C401	105.4	301.2	917 122470EM	CAP-AL.ELEC,476M,1E	(T)25V 47M	
C402	96.1	250.6	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C404	84.4	241.2	916 165220LJAH	CAP-MYLAR,223J,2A,5P	(T)100V 223J	
C405	91.4	254.4	915 163470LJXH	CAP-CERAMIC,471J,2A,MONO	470PF,100V,5%,NPO,RE-RADIAL	
C406	89.0	235.5	915 163100HKXH	CAP-CERAMIC,101K,1H,DISC	100PF,50V,10%,C0G,RE-RADIAL	
C407	97.0	270.6	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C408	85.7	257.8	915 163680HJXH	CAP-CERAMIC,681J,1H,MONO	680pF,50V,5%,COG,RE-RADIAL	
C409	101.9	270.0	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C410	86.6	268.2	916 165220LJAH	CAP-MYLAR,223J,2A,5P	(T)100V 223J	
C411	95.9	259.7	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C412	93.3	296.5	917 863470EMAH	CAP-AL.ELEC,477M.1E,10x12.5	(T)470UF,25V,20%,R-RADIAL	
C414	114.0	277.7	916 567100JKAH	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C415	144.5	149.5	917 812470HM	CAP-AL.ELE,476M,1H,5X11,105C	(T)50V 47M	
C416	158.7	131.7	915 164100LJXH	CAP-CERAMIC,102J,2A,MONO	1NF,100V,5%,NPO,RE-RADIAL,DIPPE	
C417	179.3	213.7	916 165270LJAH	CAP-MYLAR,273J,2A,5P	(T)100V 273J	
C418	186.8	223.4	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,-,-,Y5P	
C419	222.4	215.4	916 355180TJAL	CAP-PPF,183J,2G(20X13.5	18NF,400V 5%,RE-RADIAL	
C420	201.9	236.8	917 122470EM	CAP-AL.ELEC,476M,1E	(T)25V 47M	
C421	207.6	248.1	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C422	164.5	126.9	915 323220YKPH	CAP-CERAMIC,221K,3D,Y5P	220PF,2KV,10%,10%,Y5P	
C423	160.4	120.6	915 324100XKPH	CAP-CERAMIC,102K,3A,DISC	1NF,1KV,10%,Y5P,DISC-RADIAL	
C424	231.7	140.3	916 944300YJAH	CAP-MPE/PPF,302J,3C,20P	2NF,1.6KV,5%,RE-RADIAL	
C425	226.0	149.0	916 944220YJAL	CAP-MPE/PPF,222J,3C,7.5P	2.2NF,1.6KV,5%,RE-RADIAL	
C426	201.1	185.6	915 323100VKPH	CAP-CERAMIC,101K,2H,Y5P	100PF,500V,10%,-,-,Y5P	
C427	218.6	205.3	915 324470VKPH	CAP-CERAMIC,472K,2H,Y5P	4.7NF,500V,10%,10%,Y5P	
C428	235.1	254.7	916 656150QJAL	CAP-MPPF,154J,2E,7.5P	150NF,250V 5%,RE-RADIAL	
C429	233.5	271.5	916 656150QJAL	CAP-MPPF,154J,2E,7.5P	150NF,250V 5%,RE-RADIAL	
C430	235.6	237.5	916 656680QJAH	CAP-MPPF,684J,2E,20P	680NF,250V,5%,-,RE-RADIAL	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
C431	233.5	280.0	916 656100QJAL	CAP-MPPF,104J,2G,12.5P	400V 104J	
C432	233.5	288.6	916 656150QJAL	CAP-MPPF,154J,2E,7.5P	150NF,250V 5%,RE-RADIAL	
C433	235.1	247.6	916 656150QJAL	CAP-MPPF,154J,2E,7.5P	150NF,250V 5%,RE-RADIAL	
C434	235.6	262.6	916 656680QJAH	CAP-MPPF,684J,2E,20P	680NF,250V,5%,-,RE-RADIAL	
C435	209.1	276.2	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C436	209.0	288.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C437	207.7	251.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C438	208.8	244.9	915 324100HZVH	CAP-CERAMIC,102Z,1H,Y5V	1NF,50V,-20TO80%,-80TO30%,Y5V	
C442	57.5	249.3	916 165680LJAH	CAP-MYLAR,683J,2A,5P	(T)100V 683J	
C446	166.3	197.4	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C451	166.2	191.2	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
C452	191.9	192.5	916 165470LJAH	CAP-MYLAR,473J,2A,5P	(T)100V 473J	
C453	191.3	215.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C454	187.7	238.1	916 165100LJAH	CAP-MYLAR,103J,2A,5P	(T)100V 103J	
C455	192.6	244.3	915 313330HJHH	CAP-CERAMIC,331J,1H,SL	330PF,50V,5%,SL,RADIAL	
C456	190.6	226.7	915 323100HKPH	CAP-CERAMIC,101K,1H,Y5P	100PF,50V,10%,-,-,Y5P	
C471	16.4	181.2	917 221330HMAH	CAP-AL.NP-ELEC,335M,1H,6X11	(T)50V 3.3M	
C491	51.9	258.1	915 324100HKPH	CAP-CERAMIC,102K,1H,Y5P	1NF,50V,10%,10%,Y5P,DISC-RADIAL	
C492	173.5	145.0	916 567100JKAH	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C493	199.4	226.4	917 862220QMAH	CAP-AL.ELEC,226M.2E,10X20	(T)22UF,250V,20%,R-RADIAL	
C494	101.5	260.6	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C501	94.4	52.0	917 122470HM	CAP-AL.ELEC,476M,1H	(T)50V 47M	
C502	94.6	24.0	915 163470LJXH	CAP-CERAMIC,471J,2A,MONO	470PF,100V,5%,NPO,RE-RADIAL,DIP	
C503	172.1	50.2	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C504	144.2	33.7	916 354100ZKAL	CAP-PPF,102K,3D,17.5P	2KV 102K	
C505	106.2	63.4	917 862220QMAH	CAP-AL.ELEC,226M.2E,10X20	(T)22UF,250V,20%,R-RADIAL	
C506	165.7	24.1	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C507	159.2	13.3	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C508	166.2	13.3	917 122470CM	CAP-AL.ELEC,476M,1C	(T)16V 47M	
C509	194.3	15.6	915 323680HKPH	CAP-CERAMIC,681K,1H,Y5P	680PF,50V,10%,10%,Y5P	
C510	190.3	15.5	916 166100LJAH	CAP-MYLAR,104J,2A,5P	(T)100V 104J	
C511	195.1	22.7	916 165100LJAH	CAP-MYLAR,103J,2A,5P	(T)100V 103J	
C513	157.3	90.2	917 742100QM	CAP-AL.ELE,106M,2E,10X20	(T)250V 10M	
C514	223.5	26.1	916 566100JJAH	CAP-MPETP,104J,1J,5P	(T)63V 104J	
C515	223.7	33.0	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C516	229.0	103.9	917 123100FM	CAP-AL.ELEC,107M,1V	(T)35V 100M	
C517	218.5	156.0	916 655470TJAL	CAP-MPPF,473J,2G,7.5P	47NF,400V 5%,RE-RADIAL	
C518	146.7	96.0	915 324100VKPH	CAP-CERAMIC,102K,2H,Y5P	1NF,500V,20%,10%,Y5P,DISC-RADIAL	
C519	113.2	87.8	916 164470LJAH	CAP-MYLAR,472J,2A,5P	(T)100V 472J	
C520	226.6	21.6	917 122470HM	CAP-AL.ELEC,476M,1H	(T)50V 47M	
C521	114.4	67.8	917 122330EM	CAP-AL.ELEC,336M,1E	(T)25V 33M	
C525	118.3	64.3	916 656330TJAH	CAP-MPPF,334J,2G	330NF,400V 334J,5%,RE-RADIAL	
C541	156.0	38.6	917 122330EM	CAP-AL.ELEC,336M,1E	(T)25V 33M	
C543	169.6	39.5	917 121330HM	CAP-AL.ELEC,335M,1H	(T)50V 3.3M	
C544	202.0	23.0	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C545	202.6	15.5	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C551	104.2	207.7	916 566100JJAH	CAP-MPETP,104J,1J,5P	(T)63V 104J	
C552	116.1	207.9	916 164100LJAH	CAP-MYLAR,102J,2A,5P	(T)100V 102J	
C553	27.5	282.4	917 123100FM	CAP-AL.ELEC,107M,1V	(T)35V 100M	
C554	16.9	290.9	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C555	11.1	290.8	917 122100HM	CAP-AL.ELEC,106M,1H	(T)50V 10M	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
C556	21.3	261.9	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C557	11.7	263.4	917 121100HM	CAP-AL.ELEC,105M,1H	(T)50V 1M	
C571	188.7	36.0	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C581	152.9	47.7	917 312330DK	CAP-TANTAL,336K,1D	(T)33UF,20V,10%,DIP-RADIAL,5MM	
C599	91.8	199.8	916 165270LJAH	CAP-MYLAR,273J,2A,5P	(T)100V 273J	
C601	47.0	65.0	918 146470QK	CAP-MPAPER,474K,250VAC	470NF,250VAC,10%,X2,RE-RAD,25.4	
C602	24.2	35.7	918 144470QM	CAP-MPAPER,472M,250VAC	4.7NF,250VAC,20%,Y,RE-RADI,10.2	
C603	39.8	35.7	918 144470QM	CAP-MPAPER,472M,250VAC	4.7NF,250VAC,20%,Y,RE-RADI,10.2	
C604	101.7	11.1	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C605	62.4	75.9	917 793330TMAX	CAP-AL.ELEC,337M,2G,30X40	(B)330UF,400V,20%,R-RADIAL	
C606	55.9	95.4	917 743100EM	AM CAP-AL.ELEC,107M,1E,105C	ST 01607-936-101	
C609	30.1	83.0	915 325100YZUH	CAP-CERAMIC,103Z,3D,Y5U	10NF,2KV,-20 TO 80%,-55TO20%,Y5	
C610	43.4	111.3	915 323220YKPH	CAP-CERAMIC,221K,3D,Y5P	220PF,2KV,10%,10%,Y5P	
C611	78.1	42.4	916 164150LJAH	CAP-MYLAR,152J,2A,3P	(T)100V 152J	
C612	96.5	90.5	917 121470HM	CAP-AL.ELEC,475M,1H	(T)50V 4.7M	
C613	88.8	102.6	916 567100JKAH	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C614	12.9	163.0	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	
C615	7.8	173.2	915 344470MMVH	CAP-CERAMIC,472M,2B,DISC	4.7NF,125VAC,20%,Y5V,RADIAL	
C621	106.8	102.1	917 862330QMAH	CAP-AL.ELEC,336M.2E,12.5x20	(T)33UF,250V,20%,R-RADIAL	
C622	97.3	120.0	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C623	114.9	146.5	917 863220LMAH	CAP-AL.ELEC,227M.2A,12.5x22	(T)220UF,160V,20%,R-RADIAL	
C624	106.6	134.8	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C625	101.1	149.5	917 863220LMAH	CAP-AL.ELEC,227M.2A,12.5x22	(T)220UF,160V,20%,R-RADIAL	
C626	104.3	140.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C627	106.7	188.9	917 864220EMAH	CAP-AL.ELEC,228M.1E,85C	(T)2200UF,25V,20%,R-RADIAL	
C628	52.7	186.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C629	99.2	163.0	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
C630	88.0	163.2	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C631	105.6	170.6	917 864100EMAH	CAP-AL.ELEC,108M.1E,12.5x20	(T)1000UF,25V,20%,R-RADIAL	
C632	93.8	164.4	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C633	88.9	192.8	917 864100EMAH	CAP-AL.ELEC,108M.1E,12.5x20	(T)1000UF,25V,20%,R-RADIAL	
C634	77.3	189.1	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C651	151.9	192.0	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C652	138.7	204.3	917 864100FMAH	CAP-AL.ELEC,108M,1V,85C	(T)1000UF,35V,20%,R-RADIAL	
C653	146.2	164.8	917 123100EM	CAP-AL.ELEC,107M,1E	(T)25V 100M	
C654	146.0	170.1	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C655	49.5	176.5	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C656	65.0	196.0	917 873100EMAH	CAP-AL.ELEC,107M.1E,105C	(T)100UF,25V,20%,R-RADIAL	
C657	53.8	191.3	915 325100HZVH	CAP-CERAMIC,103Z,1H,Y5V	10NF,50V,-20 TO 80%,-80TO30%,Y5	
C658	59.0	182.8	917 864100EMAH	CAP-AL.ELEC,108M.1E,12.5x20	(T)1000UF,25V,20%,R-RADIAL	
C659	10.3	154.8	917 122220LM	CAP-AL.ELEC,226M,2A	(T)100V 22M	
C660	114.8	126.1	917 862330QMAH	CAP-AL.ELEC,336M.2E,12.5x20	(T)33UF,250V,20%,R-RADIAL	
C661	151.3	184.1	917 122100EM	CAP-AL.ELEC,106M,1E	(T)25V 10M	
C670	157.6	212.3	917 123220EM	AM CAP-AL.ELEC,227M,1E	ST 21609-401-690	
C682	153.7	195.4	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C683	173.5	151.9	916 567100JKAH	CAP-MPETP,105K,1J,5P	(T)63V 105K	
C686	101.3	273.9	916 165100LJAH	CAP-MYLAR,103J,2A,5P	(T)100V 103J	
C687	182.0	25.5	917 122220EM	CAP-AL.ELEC,226M,1E	(T)25V 22M	
C698	74.0	141.3	915 312150VJXH	CAP-CERAMIC,150J,2H,DISC	15PF,500V,5%,NPO,DISC-RADIAL	
CN201	147.4	7.3	935 720084BA	CON-MINIATURE JACK,3P	ST:2.6DIA,7.6X13X6.5MM	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
CN202	202.8	315.5	935 240103JA	CON-BOX HEADER,3P,2MM	1R,STRAIGHT,SN	
CN301	46.1	206.5	935 220103TE	CON-NOWALL HEADER,3P,1R	STRAIGHT,SN,-,9.15MM	
CN401	205.0	153.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
CN471	9.2	182.9	935 240903DW	CON-WALL HEADER,3P,2.5MM	STRAIGHT,1WALL,SN	
CN601	27.0	4.0	943 150034BA	FIL-LPF,EMI,250V,3A	250V,3A,-,2MHZ(30DB)	
CN602	79.3	10.7	935 240903DLSA	CON-WALL HEADER,3P,3.96	STRAIGHT,1WALL,-	
CN605	24.0	305.5	935 241308KB	CON-WALL HEADER,8P,2MM	ANGLE,3WALL,SN	
CN606	28.3	290.5	935 240108JA	CON-BOX HEADER,8P,2MM	1R,STRAIGHT,SN	●
CN901	191.8	273.8	935 240515JA	CON-BOX HEADER,15P,2MM	1R,ANGLE,SN	●
CN902	141.6	157.7	935 240111DA	CON-BOX HEADER,11P,2.5MM	1R,SRTAIGHT,SN	●
CN903	184.0	306.1	935 240103JA	CON-BOX HEADER,3P,2MM	1R,STRAIGHT,SN	●
CNSUB	183.7	297.5	935 241312KB	CON-WALL HEADER,12P,2MM	ANGLE,3WALL,SN	●
CR201	166.2	245.7	941 130073AA	OSC-CLOCK,8M,100	-,5V,40MA,10NS,1 TO 10 TTL	
D201	153.6	13.1	893 299004AF	DIODE-ZEN,BZX79C6V2,DO35	0.5W,-,5MA,-,-,-	
D202	142.0	13.0	893 299004AF	DIODE-ZEN,BZX79C6V2,DO35	0.5W,-,5MA,-,-,-	
D203	215.1	320.9	893 299004AF	DIODE-ZEN,BZX79C6V2,DO35	0.5W,-,5MA,-,-,-	
D204	214.5	307.5	893 299004AF	DIODE-ZEN,BZX79C6V2,DO35	0.5W,-,5MA,-,-,-	
D205	217.7	320.9	893 299004AF	DIODE-ZEN,BZX79C6V2,DO35	0.5W,-,5MA,-,-,-	
D206	209.6	307.5	893 299004AF	DIODE-ZEN,BZX79C6V2,DO35	0.5W,-,5MA,-,-,-	
D251	126.4	251.9	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
D301	33.9	195.0	893 290031BB	DIODE-ZEN,UZ-12BM,DO-35	0.5W,-,5MA,-,-,-	
D302	31.4	195.0	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D303	38.2	243.4	893 314937AC	DIODE-REC,1N4937,DO-41	420V,1A,1.2V,1A,200NS,1A	
D371	85.5	232.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D372	81.4	219.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D402	183.3	120.6	893 314002AB	DIODE-REC,1N4002,DO-41	70V,1A,1.1V,1A,2000NS,0.5A	
D405	210.6	133.3	893 399073AA	DIODE-REC,5THZ52	1500V,5A,1.5V,5A,1.5US	
D406	193.1	127.6	893 394007AA	AM DIODE-REC,UF4007,DO-41	ST 02169-218-100	
D407	226.5	190.5	893 314937AC	DIODE-REC,1N4937,DO-41	420V,1A,1.2V,1A,200NS,1A	
D408	230.6	179.5	893 314937AC	DIODE-REC,1N4937,DO-41	420V,1A,1.2V,1A,200NS,1A	
D409	208.2	232.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D410	213.4	281.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D411	212.1	295.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D412	213.9	266.1	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D414	199.2	241.2	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D415	181.4	221.2	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
D416	199.4	201.1	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D417	170.5	162.6	893 399044AA	DIODE-REC,UF5404,DO201AD	-,-,1V,3A,50NS	
D418	202.1	209.1	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D498	173.0	220.7	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D499	46.9	261.1	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D501	156.1	66.9	893 314002AB	DIODE-REC,1N4002,DO-41	70V,1A,1.1V,1A,2000NS,0.5A	
D504	138.9	34.5	893 394004AA	DIODE-REC,UF4004,DO-41	400V,1A,1V,1A,50NS,0.5A	
D505	162.8	26.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D506	189.6	22.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D507	176.8	35.3	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D508	198.1	23.3	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D509	157.0	83.2	893 314937AC	DIODE-REC,1N4937,DO-41	420V,1A,1.2V,1A,200NS,1A	
D510	237.4	86.0	893 314002AB	DIODE-REC,1N4002,DO-41	70V,1A,1.1V,1A,2000NS,0.5A	
D511	228.5	90.3	893 314002AB	DIODE-REC,1N4002,DO-41	70V,1A,1.1V,1A,2000NS,0.5A	
D512	214.5	19.0	893 314937AC	DIODE-REC,1N4937,DO-41	420V,1A,1.2V,1A,200NS,1A	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
D513	193.8	19.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D514	124.1	75.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D515	137.8	90.2	893 394007AA	AM DIODE-REC,UF4007,DO-41	ST 02169-218-100	
D540	163.1	41.1	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
D541	183.6	10.1	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D553	18.9	267.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D554	19.5	273.9	893 290002AC	DIODE-ZEN,ZPD2,7,DO-35	0.5W,-,5MA,-,-,-	
D555	12.7	259.2	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D556	25.4	264.3	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D571	135.4	10.6	893 290031HB	DIODE-ZEN,UZ-16BM,DO-35	0.5W,-,5MA,-,-,-	
D581	138.9	57.1	893 314001AC	DIODE-REC,1N4001GP,DO-41	50V,1A,1.1V,1A,-,-	
D582	152.1	61.3	893 314001AC	DIODE-REC,1N4001GP,DO-41	50V,1A,1.1V,1A,-,-	
D605	93.0	20.2	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D606	15.6	139.9	893 290031BB	DIODE-ZEN,UZ-12BM,DO-35	0.5W,-,5MA,-,-,-	
D607	15.6	133.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D609	29.6	128.8	893 399032AA	DIODE-REC,1R5NU41,	-,1.5A,3V,2A,100USNS,1A	
D610	44.7	101.5	893 399006AA	AM DIODE-REC,RGP02-12E	ST 02169-206-297	
D612	74.1	129.7	893 390031AA	DIODE-REC,31DF6,DO201AD	ST :600V,3A,1.25V,10uA400nS	●
D613	101.6	131.4	893 390031AA	DIODE-REC,31DF6,DO201AD	ST :600V,3A,1.25V,10uA400nS	●
D614	74.9	145.5	893 399044AA	DIODE-REC,UF5404,DO201AD	-,-,1V,3A,50NS	
D615	79.2	138.0	893 399044AA	DIODE-REC,UF5404,DO201AD	-,-,1V,3A,50NS	
D616	73.9	152.8	893 399044AA	DIODE-REC,UF5404,DO201AD	-,-,1V,3A,50NS	
D617	77.8	173.2	893 399044AA	DIODE-REC,UF5404,DO201AD	-,-,1V,3A,50NS	
D618	74.2	166.9	893 399030AA	DIODE-REC,1R5GU41	-,1.5A,1.2V,1.5A,100NS,1A	
D619	74.0	159.0	893 399044AA	DIODE-REC,UF5404,DO201AD	-,-,1V,3A,50NS	
D620	72.1	192.7	893 399044AA	DIODE-REC,UF5404,DO201AD	-,-,1V,3A,50NS	
D621	110.7	91.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D651	136.8	188.4	893 394001AA	DIODE-REC,UF4001,DO-41	50V,1A,1V,1A,50NS,0.5A	
D654	163.3	227.7	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D662	65.4	59.9	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D663	61.3	43.5	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D664	55.1	43.5	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D665	67.2	54.5	893 315399AA	DIODE-REC,1N5399GP,DO-15	1000V,-,1.4V,1.5A,2US	
D696	35.0	103.3	893 399006AA	AM DIODE-REC,RGP02-12E	ST 02169-206-297	
DQ502	140.5	49.5	893 398100AA	DIODE-REC,MUR8100,TO-220	-,8A,1.8V,8A,100NS,1A	
SW601	18.4	72.0	933 217004AA	SWITCH-KEY,DPST	250V,-,80A,DPST,Y,LUG	
E1	14.0	89.8	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E2	14.0	77.7	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	
E3	33.9	61.7	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E4	18.9	44.6	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E5	26.0	25.3	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	
E6	46.7	25.3	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	
E7	62.3	75.9	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	
E8	72.4	76.0	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	
E9	40.9	166.4	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E10	65.9	166.3	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E11	40.9	131.4	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E12	65.9	131.3	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E13	24.2	220.0	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	
E14	66.2	220.0	857 120032AB	EYELET	EYELET 2.2 HOLE 3.0 PAD 5.0	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
E15	235.6	262.6	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E16	235.6	237.5	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E21	221.6	133.3	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E22	171.1	133.3	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E23	146.5	66.8	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E24	167.7	85.5	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E25	167.7	74.2	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E26	177.5	60.5	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E27	194.5	66.5	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E28	196.7	85.5	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E29	53.7	110.6	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E30	27.0	4.0	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E31	45.5	4.0	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E41	18.4	83.9	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
E43	9.4	84.0	857 120032AA	EYELET	EYELET 1.5 HOLE 2.2 PAD 4.0	
F601	9.7	29.1	953 260023BC	FUSE-CLIP,5.2X20,30MOHM	800GF,400-800GF	⚠
HS6	127.4	21.7	831 513021AA	H/SINK-TR	HEAT-SINK(TR)	
HS301	78.2	240.5	831 512001AA	H/SINK-TR	HEAT-SINK(TR)	
HS405	150.0	28.3	TMPHEATSINK	H/SINK-FBT	HEAT-SINK(FBT)	
HS411	195.6	206.5	831 513021AA	H/SINK-TR	HEAT-SINK(TR)	
HS603	26.4	113.8	831 515030AA	H/SINK-TR	HEAT-SINK(TR)	
IC201	145.9	300.8	877 307271AA	IC-CUS,ST7271A,CONTROLLER	DIP,56,8MHz,8Bit	⚠ ⚡
IC202	130.9	273.0	887 135104SJ	IC-HYB,R-NETWORK,11P	SIP,11,10,100KOHM,5%	●
IC204	165.9	288.4	887 135472SE	IC-HYB,R-NETWORK,7P	SIP,7,6,4.7KOHM,5%	
IC205	137.4	250.3	881 307045TA	IC-LIN,7045,REGULATOR	TO-92,3,-,+4.5V	⚠
IC207	126.4	254.6	881 100358AANA	IC-LIN,358,OP AMP	DIP,8,DUAL	⚠ ⚡
IC209	164.8	259.9	887 135472SG	IC-HYB,R-NETWORK,9P	SIP,9,8,4.7KOHM,5%	⚠ ⚡
IC301	49.1	226.9	881 708172SA	IC-LIN,8172,VERTICAL	-,7,-,-	●
IC302	162.9	182.1	887 490046AA	IC-HYB,HS17H,9P	IC-HYB,CMH7379,SIZE, CONT	⚠ ⚡
IC401	82.3	245.9	881 709103AA	IC-LIN,9103,H/V CONTROLLER	POS,SIZE,PARA,XRAY,H/V REG. CON	⚠ ⚡
IC471	28.9	188.1	881 104558AA	IC-LIN,4558,OP AMP	DIP,8,DUAL	⚠ ⚡
IC501	177.7	13.2	881 600494AA	IC-LIN,DL494,PWM	DIP,16,-,-	⚠ ⚡
IC502	112.7	79.5	881 300431TANB	IC-LIN,431,REGULATOR	TO-92,3,-,36V(T)-SIMPLE	⚠ ⚡
IC506	174.1	38.2	881 300431TANB	IC-LIN,431,REGULATOR	TO-92,3,-,36V(T)-SIMPLE	
IC601	64.1	97.8	887 490048AB	IC-HYB,SMPS,VIDEO-AMP	SMPS	⚠ ⚡
IC605	49.0	187.3	881 307812KE	IC-LIN,KA78R12,REGULATOR	SEP,0.5,-,5V	⚠
IC651	147.1	179.2	881 307805KANE	IC-LIN,7805,REGULATOR	TO-220,3,-,5V	
J1	23.1	72.3	955 005001AAAB	JUMPER	JUMPER	
J2	48.0	95.7	955 005001AAAB	JUMPER	JUMPER	
JP1	141.9	45.9	955 005001AAAB	JUMPER	JUMPER	
JP2	14.8	123.9	955 005001AAAB	JUMPER	JUMPER	
JP3	63.0	103.6	955 005001AAAB	JUMPER	JUMPER	
JP4	12.9	203.0	955 005001AAAB	JUMPER	JUMPER	
JP5	24.0	203.1	955 005001AAAB	JUMPER	JUMPER	
JP6	31.8	185.7	955 005001AAAB	JUMPER	JUMPER	
JP7	43.4	194.2	955 005001AAAB	JUMPER	JUMPER	
JP8	46.1	197.3	955 005001AAAB	JUMPER	JUMPER	
JP9	69.7	188.9	955 005001AAAB	JUMPER	JUMPER	
JP10	56.5	212.9	955 005001AAAB	JUMPER	JUMPER	
JP11	31.2	228.9	955 005001AAAB	JUMPER	JUMPER	
JP12	8.5	248.6	955 005001AAAB	JUMPER	JUMPER	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
JP13	28.3	272.3	955 005001AAAB	JUMPER	JUMPER	
JP14	57.8	263.7	955 005001AAAB	JUMPER	JUMPER	
JP15	54.9	258.4	955 005001AAAB	JUMPER	JUMPER	
JP16	55.0	255.4	955 005001AAAB	JUMPER	JUMPER	
JP17	66.0	239.5	955 005001AAAB	JUMPER	JUMPER	
JP18	73.6	230.2	955 005001AAAB	JUMPER	JUMPER	
JP20	80.1	210.8	955 005001AAAB	JUMPER	JUMPER	
JP21	82.6	210.8	955 005001AAAB	JUMPER	JUMPER	
JP22	85.1	246.5	955 005001AAAB	JUMPER	JUMPER	
JP23	102.0	308.6	955 005001AAAB	JUMPER	JUMPER	
JP24	107.1	316.1	955 005001AAAB	JUMPER	JUMPER	
JP25	109.6	316.1	955 005001AAAB	JUMPER	JUMPER	
JP26	113.1	316.1	955 005001AAAB	JUMPER	JUMPER	
JP27	100.3	289.6	955 005001AAAB	JUMPER	JUMPER	
JP28	26.0	294.8	955 005001AAAB	JUMPER	JUMPER	
JP29	136.4	254.4	955 005001AAAB	JUMPER	JUMPER	
JP30	100.0	249.1	955 005001AAAB	JUMPER	JUMPER	
JP31	99.9	230.4	955 005001AAAB	JUMPER	JUMPER	
JP32	102.5	230.2	955 005001AAAB	JUMPER	JUMPER	
JP33	105.0	230.0	955 005001AAAB	JUMPER	JUMPER	
JP34	107.3	236.7	955 005001AAAB	JUMPER	JUMPER	
JP35	112.0	236.7	955 005001AAAB	JUMPER	JUMPER	
JP36	114.7	236.7	955 005001AAAB	JUMPER	JUMPER	
JP37	180.3	316.2	955 005001AAAB	JUMPER	JUMPER	
JP38	147.7	217.7	955 005001AAAB	JUMPER	JUMPER	
JP39	232.0	44.4	955 005001AAAB	JUMPER	JUMPER	
JP40	171.4	264.8	955 005001AAAB	JUMPER	JUMPER	
JP41	176.6	264.0	955 005001AAAB	JUMPER	JUMPER	
JP42	178.9	271.5	955 005001AAAB	JUMPER	JUMPER	
JP43	186.6	268.6	955 005001AAAB	JUMPER	JUMPER	
JP44	189.0	268.6	955 005001AAAB	JUMPER	JUMPER	
JP45	192.2	266.2	955 005001AAAB	JUMPER	JUMPER	
JP46	193.1	254.8	955 005001AAAB	JUMPER	JUMPER	
JP47	132.9	236.8	955 005001AAAB	JUMPER	JUMPER	
JP48	172.0	239.4	955 005001AAAB	JUMPER	JUMPER	
JP49	230.3	318.1	955 005001AAAB	JUMPER	JUMPER	
JP50	232.9	318.1	955 005001AAAB	JUMPER	JUMPER	
JP51	235.3	318.0	955 005001AAAB	JUMPER	JUMPER	
JP52	146.8	233.4	955 005001AAAB	JUMPER	JUMPER	
JP53	128.8	225.3	955 005001AAAB	JUMPER	JUMPER	
JP54	128.9	222.0	955 005001AAAB	JUMPER	JUMPER	
JP55	143.4	219.4	955 005001AAAB	JUMPER	JUMPER	
JP56	211.2	209.6	955 005001AAAB	JUMPER	JUMPER	
JP57	175.2	191.3	955 005001AAAB	JUMPER	JUMPER	
JP58	150.2	208.7	955 005001AAAB	JUMPER	JUMPER	
JP59	116.6	198.6	955 005001AAAB	JUMPER	JUMPER	
JP60	117.1	186.6	955 005001AAAB	JUMPER	JUMPER	
JP61	121.3	176.3	955 005001AAAB	JUMPER	JUMPER	
JP62	120.4	173.6	955 005001AAAB	JUMPER	JUMPER	
JP63	104.2	179.6	955 005001AAAB	JUMPER	JUMPER	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
JP64	82.0	179.0	955 005001AAAB	JUMPER	JUMPER	
JP65	82.0	176.3	955 005001AAAB	JUMPER	JUMPER	
JP66	129.4	160.0	955 005001AAAB	JUMPER	JUMPER	
JP67	122.4	157.0	955 005001AAAB	JUMPER	JUMPER	
JP68	124.4	153.9	955 005001AAAB	JUMPER	JUMPER	
JP69	126.3	143.3	955 005001AAAB	JUMPER	JUMPER	
JP70	125.5	128.4	955 005001AAAB	JUMPER	JUMPER	
JP71	153.8	170.9	955 005001AAAB	JUMPER	JUMPER	
JP72	163.2	174.6	955 005001AAAB	JUMPER	JUMPER	
JP73	165.7	173.4	955 005001AAAB	JUMPER	JUMPER	
JP74	151.7	161.0	955 005001AAAB	JUMPER	JUMPER	
JP75	180.9	147.5	955 005001AAAB	JUMPER	JUMPER	
JP76	185.4	143.9	955 005001AAAB	JUMPER	JUMPER	
JP77	183.0	134.9	955 005001AAAB	JUMPER	JUMPER	
JP78	126.8	100.3	955 005001AAAB	JUMPER	JUMPER	
JP79	126.8	97.6	955 005001AAAB	JUMPER	JUMPER	
JP80	95.8	94.2	955 005001AAAB	JUMPER	JUMPER	
JP81	96.0	81.9	955 005001AAAB	JUMPER	JUMPER	
JP82	145.6	87.2	955 005001AAAB	JUMPER	JUMPER	
JP83	126.8	83.7	955 005001AAAB	JUMPER	JUMPER	
JP84	116.8	78.6	955 005001AAAB	JUMPER	JUMPER	
JP85	163.1	63.2	955 005001AAAB	JUMPER	JUMPER	
JP86	124.1	69.7	955 005001AAAB	JUMPER	JUMPER	
JP87	125.5	58.8	955 005001AAAB	JUMPER	JUMPER	
JP88	138.9	53.4	955 005001AAAB	JUMPER	JUMPER	
JP89	174.3	264.0	955 005001AAAB	JUMPER	JUMPER	
JP90	140.7	16.6	955 005001AAAB	JUMPER	JUMPER	
JP91	186.6	32.9	955 005001AAAB	JUMPER	JUMPER	
JP92	50.6	106.5	955 005001AAAB	JUMPER	JUMPER	
JP93	205.9	34.2	955 005001AAAB	JUMPER	JUMPER	
JP94	117.9	102.9	955 005001AAAB	JUMPER	JUMPER	
JP95	111.7	211.3	955 005001AAAB	JUMPER	JUMPER	
JP96	94.6	225.1	955 005001AAAB	JUMPER	JUMPER	
JP97	126.1	148.8	955 005001AAAB	JUMPER	JUMPER	
JP98	126.0	145.9	955 005001AAAB	JUMPER	JUMPER	
JP99	124.1	190.1	955 005001AAAB	JUMPER	JUMPER	
JP100	22.1	213.4	955 005001AAAB	JUMPER	JUMPER	
JP101	224.7	120.8	955 005001AAAB	JUMPER	JUMPER	
JP102	224.7	117.4	955 005001AAAB	JUMPER	JUMPER	
JP103	38.5	103.4	955 005001AAAB	JUMPER	JUMPER	
JP104	127.6	77.5	955 005001AAAB	JUMPER	JUMPER	
JP105	98.6	281.0	955 005001AAAB	JUMPER	JUMPER	
JP106	234.4	44.5	955 005001AAAB	JUMPER	JUMPER	
JP107	71.1	91.5	955 005001AAAB	JUMPER	JUMPER	
JP108	88.9	289.5	955 005001AAAB	JUMPER	JUMPER	
JP109	160.9	81.1	955 005001AAAB	JUMPER	JUMPER	
JP110	121.7	212.1	955 005001AAAB	JUMPER	JUMPER	
JP111	123.6	208.2	955 005001AAAB	JUMPER	JUMPER	
JP112	103.2	161.7	955 005001AAAB	JUMPER	JUMPER	
JP113	87.2	129.5	955 005001AAAB	JUMPER	JUMPER	
JP114	90.0	129.5	955 005001AAAB	JUMPER	JUMPER	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
JP115	61.0	37.6	955 005001AAAB	JUMPER	JUMPER	
JP116	170.4	216.6	955 005001AAAB	JUMPER	JUMPER	
JP117	152.8	208.7	955 005001AAAB	JUMPER	JUMPER	
JP118	179.6	43.3	955 005001AAAB	JUMPER	JUMPER	
JP119	212.2	37.6	955 005001AAAB	JUMPER	JUMPER	
JP120	174.4	251.4	955 005001AAAB	JUMPER	JUMPER	
JP121	172.3	243.4	955 005001AAAB	JUMPER	JUMPER	
JP122	153.3	316.3	955 005001AAAB	JUMPER	JUMPER	
JP123	150.6	317.4	955 005001AAAB	JUMPER	JUMPER	
JP124	147.3	318.7	955 005001AAAB	JUMPER	JUMPER	
JP125	144.8	322.8	955 005001AAAB	JUMPER	JUMPER	
JP126	90.4	105.9	955 005001AAAB	JUMPER	JUMPER	
JP127	173.6	249.0	955 005001AAAB	JUMPER	JUMPER	
JP128	172.6	246.7	955 005001AAAB	JUMPER	JUMPER	
JP129	77.7	141.8	955 005001AAAB	JUMPER	JUMPER	
JP130	77.1	133.9	955 005001AAAB	JUMPER	JUMPER	
JP131	85.8	265.3	955 005001AAAB	JUMPER	JUMPER	
JP132	40.3	186.0	955 005001AAAB	JUMPER	JUMPER	
JP133	133.6	191.1	955 005001AAAB	JUMPER	JUMPER	
JP134	117.2	264.7	955 005001AAAB	JUMPER	JUMPER	
JP135	189.2	230.4	955 005001AAAB	JUMPER	JUMPER	
JP136	117.4	269.8	955 005001AAAB	JUMPER	JUMPER	
JP137	85.7	294.8	955 005001AAAB	JUMPER	JUMPER	
JP138	89.0	287.2	955 005001AAAB	JUMPER	JUMPER	
JP139	92.6	285.0	955 005001AAAB	JUMPER	JUMPER	
JP140	104.5	321.7	955 005001AAAB	JUMPER	JUMPER	
JP141	5.8	242.2	955 005001AAAB	JUMPER	JUMPER	
JP142	92.0	94.1	955 005001AAAB	JUMPER	JUMPER	
JP143	26.9	177.9	955 005001AAAB	JUMPER	JUMPER	
L401	223.7	172.4	923 460193DA	EI2519,39.5T	TRANS-GATE,DRIVE,EI2519	●
L402	100.1	255.9	925 001001AH	INDUCTOR-AXIAL,5.6UH	FIX,5.6UH,10%,65,-,4X10.5MM	●
L403	212.0	164.9	923 460193EA	UU11X16MM	TRANS-CURRENT	●
L404	209.2	185.2	925 460193BA	COIL-CHOKE,53uH	ST:DR8X11MM,41.5T,0.08Ohm	
L601	33.9	61.5	925 460148AA	COIL-LINE FILTER	39UH(25X32)	
OP201	65.3	314.8	895 110048DB	LED,G/Y,ROUND,4.8MM	4.8MM,N,2-LOW,5V	
PTH601	65.0	14.5	897 110541AA	POSISTOR,14,SQUARE,13.5X17.7	20%,-,15~20%/C	
Q301	25.5	207.0	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q302	17.8	210.2	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q402	109.9	238.9	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q403	105.0	238.9	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q408	192.1	208.1	891 890740AA	AM FET-N,IRF740,TO-220	ST 02149-601-441	
Q409	110.4	199.3	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q411	213.6	271.5	891 890021ABNA	FET-N,IRF640,TO-220AB,GDS	125W,200V,18A	
Q412	213.6	287.0	891 890021ABNA	FET-N,IRF640,TO-220AB,GDS	125W,200V,18A	
Q413	197.3	248.6	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q414	213.6	250.2	891 890021ABNA	FET-N,IRF640,TO-220AB,GDS	125W,200V,18A	
Q415	151.2	137.9	891 890610AA	FET-N,IRF610,TO-220AB,GDS	43W,200V,3.3A	
Q416	176.6	133.3	891 465129AA	TR-NPN,2SC5129,TO-3P(H	TP : 50W,1500V,600V,5V,10A	
Q419	98.9	237.3	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q420	204.0	241.2	891 391008XA	TR-NPN,KSC1008,TO-92,ECB	0.8W,80V,60V,8V,0.7A	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
Q471	37.8	181.4	891 290772AA	TR-PNP,KSB772,TO-126,ECB	1W,-40V,-30V,-5V,-3A	
Q472	44.0	181.4	891 490882AB	TR-NPN,KSD882,TO-126,ECB	1W,40V,30V,5V,3A	
Q499	93.5	241.9	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q501	102.6	49.1	891 890610AA	FET-N,IRF610,TO-220AB,GDS	43W,200V,3.3A	
Q502	146.5	72.3	891 465129AA	TR-NPN,2SC5129,TO-3P(H	TP : 50W,1500V,600V,5V,10A	⚠
Q503	124.9	17.7	891 890740AA	AM FET-N,IRF740,TO-220	ST 02149-601-441	
Q504	122.7	93.1	891 463675AA	TR-NPN,2SC3675,TO-220,BCE	10W,1500V,900V,5V,0.1A	
Q505	100.6	196.6	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q509	159.1	23.4	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q510	22.0	290.6	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q511	22.4	280.1	891 190733XC	TR-PNP,KSA733,TO-92,EBC	0.25W,-60V,-50V,-5V,-0.15A	
Q512	58.2	282.4	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q515	183.0	36.2	891 392222XA	TR-NPN,MPS2222A,TO-92,EBC	0.625W,75V,40V,6V,0.6A	
Q516	206.7	19.5	891 123906XANC	TR-PNP,2N3906,TO-92,EBC	0.625W,40V,40V,5V,0.2A	
Q591	222.7	297.7	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q592	233.4	302.6	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q601	101.8	20.0	891 391008XA	TR-NPN,KSC1008,TO-92,ECB	0.8W,80V,60V,8V,0.7A	
Q602	23.2	144.0	891 490029AA	TR-NPN,TIP29,TO-220,BCE	2W,100V,100V,5V,1A	
Q603	48.2	110.6	891 881358AA	FET-N,2SK1358,TO-3P,GDS	150W,900V,9A	⚠
Q604	91.6	108.8	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q605	96.2	116.0	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q651	147.0	202.0	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q652	156.1	204.3	891 390006XB	TR-NPN,KSC945,TO-92,EBC	0.25W,60V,50V,5V,0.15A	
Q653	154.8	179.2	891 290614AB	TR-PNP,KSA614,TO-220,BCE	25W,-80V,-55V,-5V,-3A	
R201	113.9	302.8	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R202	121.3	302.4	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R203	121.2	298.4	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R204	121.2	295.9	911 152407YA	REF-CF,24K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R205	121.2	290.8	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R206	121.2	288.1	911 153307YA	REF-CF,33K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R207	121.2	283.1	911 152707YA	REF-CF,27K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R208	121.2	280.6	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R209	121.2	277.9	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R210	121.2	275.4	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R211	133.4	299.4	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R212	133.4	296.8	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R213	133.4	294.3	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R214	133.4	291.9	911 151507YA	REF-CF,15K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R215	133.4	289.3	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R216	133.4	286.8	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R217	133.4	284.3	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R218	133.4	281.5	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R219	133.4	278.9	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R220	133.4	276.5	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R221	176.6	317.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R222	176.6	315.0	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R227	136.4	259.5	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R228	207.2	302.0	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R229	212.0	302.0	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R230	158.6	314.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R231	155.9	315.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R233	151.8	226.9	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R234	149.4	226.9	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R235	169.0	256.9	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R236	119.9	225.6	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R237	142.9	256.9	911 132207YA	REF-CF,220,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R238	168.7	306.4	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R239	168.7	304.0	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R240	168.5	269.8	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R241	175.2	299.0	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R242	168.6	294.0	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R243	175.1	291.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R244	177.5	287.6	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R245	175.0	285.0	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R246	175.0	282.4	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R247	175.0	280.0	911 143907YA	REF-CF,3.9K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R248	168.5	277.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R249	168.5	274.8	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R250	168.5	272.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R254	175.2	301.5	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R255	181.3	265.1	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R256	183.9	265.1	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R257	164.7	249.2	911 174707YA	REF-CF,4.7M,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R258	117.2	267.1	911 152407YA	REF-CF,24K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R259	126.5	269.6	911 151207YA	REF-CF,12K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R261	115.3	286.9	911 156807YA	REF-CF,68K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R262	126.4	228.4	911 151207YA	REF-CF,12K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R263	121.2	272.6	911 158207YA	REF-CF,82K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R271	136.4	262.2	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R273	167.0	236.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R299	183.1	254.9	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R301	25.5	245.7	911 811207GA	REF-FUSIBLE,1.2,5%,1W	-,-350 TO +350PPM/C,R-AXIAL	
R302	76.8	208.8	911 811207GA	REF-FUSIBLE,1.2,5%,1W	-,-350 TO +350PPM/C,R-AXIAL	
R303	24.6	226.6	911 111507FA	REF-CF,1.5,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R304	33.9	212.8	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R305	27.5	213.0	911 336807JF	REF-MO,680,5%,2W	350V,-350 TO +350PPM/C,R-AXIAL	
R308	57.7	266.6	911 151507YA	REF-CF,15K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R310	127.7	293.4	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R311	61.5	252.6	911 161507YA	REF-CF,150K,5%,1/6W	150V,-1300 TO + 350PPM/C,R-AXIA	
R313	57.0	239.2	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R314	41.5	247.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R315	52.5	230.8	911 309007JF	REF-MO,0.9,5%,2W	350V,-350 TO +350PPM/C,R-AXIAL	
R320	28.9	203.0	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R321	15.7	192.1	911 141007FF	REF-CF,1K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R323	51.8	252.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R324	57.7	261.2	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R325	47.2	273.2	911 152407YA	REF-CF,24K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R326	49.8	276.1	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R327	21.3	203.1	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R328	56.9	221.3	911 146807YA	REF-CF,6.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R329	18.6	192.1	911 141007FF	REF-CF,1K,5%,1/2W(S	300V,-200 TO +200PPM/C,R-AXIAL	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R351	108.9	213.5	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R353	170.6	219.7	911 162407CA	REF-CF,240K,5%,1/8W	150V,-1000 PPM/C,R-AXIAL	
R354	179.1	227.8	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R355	179.1	230.5	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R404	150.7	111.2	911 152707YA	REF-CF,27K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R405	85.7	251.6	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R406	85.1	244.0	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R407	93.2	271.0	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R408	96.5	262.9	911 446805DA	REF-MF,6.8K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R409	85.7	249.0	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R410	93.2	273.4	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R411	85.6	260.4	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R412	100.0	252.2	911 144707FF	REF-CF,4.7K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R413	121.2	285.6	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R414	113.8	266.9	911 152007YA	REF-CF,20K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R415	146.2	108.2	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R417	125.8	139.8	911 332207LF	REF-MO,220,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R418	125.8	132.4	911 332207LF	REF-MO,220,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R419	149.1	134.7	911 141007DA	REF-CF,1K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R420	50.0	250.1	911 151207YA	REF-CF,12K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R421	96.1	227.8	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R422	159.5	191.6	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R423	167.8	213.6	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R424	175.7	220.7	911 152007YA	REF-CF,20K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R425	183.9	222.6	911 136807YA	REF-CF,680,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R426	233.5	199.2	911 814707FA	REF-FUSIBLE,4.7,5%,1/2W	250V,-500 TO +500PPM/C,R-AXIAL	
R427	218.5	195.2	911 341007GF	REF-MO,1K,5%,1W(S	350V,-350 TO +350PPM/C,R-AXIAL	
R428	116.6	194.4	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R429	168.5	267.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R430	202.7	179.7	911 331507JF	REF-MO,150,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	
R431	204.5	138.6	911 113307FA	REF-CF,3.3,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R432	200.5	138.6	911 113307FA	REF-CF,3.3,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R433	196.6	138.6	911 113307FA	REF-CF,3.3,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R434	223.2	242.6	911 171007YA	REF-CF,1M,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R435	223.0	275.6	911 171007YA	REF-CF,1M,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R436	223.0	284.3	911 171007YA	REF-CF,1M,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R438	223.0	266.9	911 171007YA	REF-CF,1M,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R439	199.5	260.4	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R440	192.3	263.0	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R441	199.0	257.6	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R442	168.2	118.6	911 312207LF	REF-MO,2.2,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R443	168.2	124.9	911 311807JF	REF-MO,1.8,5%,2W	350V,-350 TO +350PPM/C,R-AXIAL	
R445	168.2	226.2	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R452	192.5	212.4	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R453	188.2	203.7	911 122207YA	REF-CF,22,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R454	188.2	200.7	911 146807YA	REF-CF,6.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R455	206.0	198.3	911 812207FA	REF-FUSIBLE,2.2,5%,1/2W	-,-350 TO +350PPM/C,R-AXIAL	
R456	199.3	270.0	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R457	191.2	238.8	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R459	145.8	136.3	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R471	34.4	182.5	911 153607YA	REF-CF,36K,5%,1/6W	150V,-1300 TO +350PPM/C,1.9X3.2	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R472	31.9	188.6	911 152007YA	REF-CF,20K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R473	36.4	196.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R474	26.4	198.6	911 149107YA	REF-CF,9.1K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R475	17.7	178.2	911 123307FF	REF-CF,33,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R491	51.8	255.0	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R495	88.1	232.5	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R498	92.0	225.5	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R499	83.4	238.3	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R501	93.7	70.0	911 341507GF	REF-MO,1.5K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R502	97.9	69.9	911 341507GF	REF-MO,1.5K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R503	93.5	42.6	911 132207FA	REF-CF,220,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R504	113.3	47.5	911 136807YA	REF-CF,680,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R505	108.0	53.0	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R508	106.2	90.6	911 811807JA	REF-FUSIBLE,1.8,5%,2W	-,-350 TO +350PPM/C,R-AXIAL	
R509	159.6	26.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R510	158.6	16.2	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R511	170.8	10.2	911 145107YA	REF-CF,5.1K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R512	140.8	19.9	911 112207DA	REF-CF,2.2,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R513	192.1	24.2	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R514	187.0	8.8	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R515	220.6	12.2	911 145107YA	REF-CF,5.1K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R516	198.2	13.9	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R517	220.6	23.6	911 161007DA	REF-CF,100K,5%,1/4W	250V,-600 TO -150PPM/C,R-AXIAL	
R518H	162.5	115.1	911 328207JF	REF-MO,82,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	
R520	141.8	93.9	911 163307FA	REF-CF,330K,5%,1/2W	350V,-600 TO -150PPM/C,R-AXIAL	
R521	132.1	74.9	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R522	123.3	81.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R523	138.6	72.2	911 141007FF	REF-CF,1K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R524	124.1	73.1	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R525	109.5	76.6	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R526	112.4	76.6	911 162207YA	REF-CF,220K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R527	126.3	151.4	911 161807YA	REF-CF,180K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R541	167.3	57.8	911 811207FA	REF-FUSIBLE,1.2,5%,1/2W	-,-350 TO +350PPM/C,R-AXIAL	
R542	165.6	39.6	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R543	160.4	39.6	911 152707YA	REF-CF,27K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R544	194.7	30.9	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R545	207.4	37.2	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R546	208.4	34.2	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R547	126.8	86.6	911 162207FA	REF-CF,220K,5%,1/2W	350V,-600 TO -150PPM/C,R-AXIAL	
R548	126.8	80.9	911 161807FA	REF-CF,180K,5%,1/2W	350V,-600 TO -150PPM/C,R-AXIAL	
R549	181.0	11.6	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R550	15.9	251.2	911 152207YA	REF-CF,22K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R551	100.9	203.3	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R552	98.1	193.2	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R553	36.3	285.3	911 156807YA	REF-CF,68K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R554	8.8	275.4	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R555	178.6	291.6	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R556	14.4	281.9	911 141007DA	REF-CF,1K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R557	60.3	291.6	911 131007DA	REF-CF,100,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R558	11.4	275.4	911 141507YA	REF-CF,1.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R559	18.8	257.7	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R567	39.3	271.4	911 331507GF	REF-MO,150,5%,1W	350V,-350 TO +350PPM/C,R-AXIAL	
R581	231.8	108.2	911 151807YA	REF-CF,18K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R591	237.1	296.9	911 131007YA	REF-CF,100,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R592	227.9	303.5	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R593	230.3	303.5	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R594	225.5	297.0	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R601	55.3	25.3	911 163307FA	REF-CF,330K,5%,1/2W	350V,-600 TO -150PPM/C,R-AXIAL	
R602	96.6	16.6	911 124707FF	REF-CF,47,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R603	96.6	14.1	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R605	9.5	132.9	911 344707GF	REF-MO,4.7K,5%,1W	350V,-350 TO +350PPM/C,R-AXIAL	
R606	27.7	107.8	911 356807LF	REF-MO,68K,5%,3W	500V,-200 TO +200PPM/C,R-AXIAL	
R607	40.6	107.7	911 348207LF	REF-MO,8.2K,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R608	34.1	107.7	911 348207LF	REF-MO,8.2K,5%,3W	350V,-350 TO +350PPM/C,R-AXIAL	
R611	49.2	71.6	911 355007LF	REF-MO,50K,5%,3W	500V,-200 TO +200PPM/C,R-AXIAL	
R612	57.6	104.2	911 602205JV	REF-WW,0.22,1%,2W	-,-250 TO +250PPM/C,R-AXIAL	●
R613	29.2	78.3	911 355007LF	REF-MO,50K,5%,3W	500V,-200 TO +200PPM/C,R-AXIAL	
R615	119.4	158.3	911 361007GF	REF-MO,100K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R616	116.3	163.3	911 811807LA	REF-FUSIBLE,1.8,5%,3W	-,-350 TO +350PPM/C,R-AXIAL	
R617	71.8	94.2	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R618	88.8	72.8	911 342707GF	REF-MO,2.7K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R619	99.4	86.4	911 133007YA	REF-CF,300,5%,1/6W	150V,-600 PPM/C,1.6X3.8MM	
R620	89.6	112.3	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R622	83.7	149.3	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R641	119.9	114.8	911 361007GF	REF-MO,100K,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R642	136.3	168.8	911 811807JA	REF-FUSIBLE,1.8,5%,2W	-,-350 TO +350PPM/C,R-AXIAL	
R651	136.7	193.7	911 141007FF	REF-CF,1K,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R653	155.7	184.5	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R656	56.0	173.4	911 141207YA	REF-CF,1.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R661	135.7	181.8	911 323307JF	REF-MO,33,5%,2W	350V,-350 TO +350PPM/C,R-AXIAL	
R672	99.6	101.2	911 151007YA	REF-CF,10K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R688	55.3	195.2	911 333907GA	REF-MO,390,5%,1W	350V,-200 TO +200PPM/C,R-AXIAL	
R945	114.8	269.5	911 164707YA	REF-CF,470K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RL401	206.9	222.2	927 300019BB	RELAY-MINIATURE,12VDC	2FORMA,5A,150MW,10MS,10MS	
RL601	88.7	30.7	927 300052BC	RELAY-MINIATURE,DC5V	2FORMA,40MA,200MW,10MS,10MS	
SK501	178.7	50.0	04569-002-210	DSP-301N	SPARK-GAP	
SK502	207.5	41.3	04569-002-210	DSP-301N	SPARK-GAP	
SW401	235.9	191.0	933 110034TC	SWITCH-TOGGLE,SP3T	-,-,-,ON-ON-ON,STRAIGHT,-	
SW601	14.0	77.6	933 210085AB	SWITCH-KEY,SPST	250V,5A,SPST,Y,ANGLE	
T401	157.3	143.0	923 460167EA	TRANS-POWER S/W	EER 19X16MM	●
T402	193.1	164.8	923 460167DA	TRANS-H PULSE	EI 30X26MM	●
T404	183.8	198.3	923 460149HA	TRANS-H-SIZE DRIVE	CORE/BOBBIN;EI16,CSG9511	●
T501	110.0	31.4	923 460167FA	TRANS-POWER S/W	EER 19X16MM	●
T502	134.6	34.5	923 460157FA	TRANS-H/V REG.CFA7679	EI 28X20MM,CFA7679(PIN TYPE)	●
T503	182.2	74.2	923 460167BA	TRANS-FLYBACK,780uH	FSW-17A002	⚠
T504	128.6	121.5	923 460157HA	TRANS-FOCUS	EI 25X19MM,2UEW 0.18MM(PIN TYPE)	●
T601	40.9	166.3	923 460167CA	TRANS-POWER S/W	EER 44_45MM	● ⚠
T602	73.8	52.1	923 460065AA	TRANS-SYNC	3MH (11X16MM)	
TH601	78.6	36.3	897 110521AA	THER,8 OHM,DISK,13MM	-,-,-	
U1	118.8	247.5	873 404066AANH	IC-MOS,4066,SWITCH	DIP,14,300MIL,QUAD	
U2	187.0	153.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
U3	197.0	153.5	935 810106AB	AM CON-TERMINAL PIN	RU 03124-700-810	
U4	205.0	153.5	935 220103TD	CON-NOWALL HEADER,3P,1R	STRAIGHT,SN,8.0MM,9.1MM	
VAR601	16.6	31.0	897 130528AA	VARI,679~829V,AXIAL,12MM	640V,480V,-,270PF	
VR172	16.9	318.1	913 151007YANA	RES-VAR,ROTARY,10K	20%,0.08W,SIDE,280	
VR502	233.6	56.4	913 455008BF	RES-VAR,SF-ROUND,50KOHM	30%,0.1W,SIDE	
VR601	98.3	76.6	913 435008BH	RES-VAR,SF-ROUND,5000HM	30%,0.1W,TOP,220 ,-,-	
VR602	41.8	318.0	913 145007YA	RES-VAR,ROTARY,5K	20%,0.05W.SIDE,300,-	
ZD504	217.7	14.5	893 290002BC	DIODE-ZEN,ZPD9.1,DO-41	0.5W,8.1V,5MA,-,-,-	
VIDEO PCB PARTS						
BD101	120.0	15.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD102	127.6	51.8	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD103	81.9	27.0	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
BD104	58.2	59.4	937 120211AA	MAG-CORE,FERRITE,BEAD	1.2UH,3.5_5.7MM,10 OHM	
C101	43.5	12.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C102	50.5	5.9	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C104	48.1	55.0	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C105	81.0	114.7	915 313150HJXH	CAP-CERAMIC,151J,1H,NPO	150PF,50V,5%,-,NPOPPM,NPO	
C106	5.9	100.7	915 312300HJXH	CAP-CERAMIC,300J,1H,NPO	30PF,50V,5%,NPOPPM,NPO	
C107	23.9	98.9	915 313100HJHH	CAP-CERAMIC,101J,1H,SL	100PF,50V,5%,P350TON1000PPM	
C108	10.6	106.4	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C109	44.3	87.9	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C110	43.8	104.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C112	49.5	83.4	917 742470CM	CAP-AL.ELEC,476M,1C,105C	(T)16V 47M	
C115	36.6	110.8	915 312220HJXH	CAP-CERAMIC,220J,1H,NPO	22PF,50V,5%,NPOPPM,NPO	
C116	36.6	114.4	915 312220HJXH	CAP-CERAMIC,220J,1H,NPO	22PF,50V,5%,NPOPPM,NPO	
C117	6.0	45.0	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C118	6.8	53.9	917 743100EM	AM CAP-AL.ELEC,107M,1E,105C	ST 01607-936-101	
C119	64.6	20.8	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C121	25.5	51.9	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C122	12.5	51.9	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C123	37.0	53.1	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C124	113.2	30.5	917 742100NM	CAP-AL,ELE,106M,2C,10X20	(T)160V 10M	
C125	71.9	107.7	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C126	79.2	110.0	917 742470LM	CAP-AL.ELEC,476M,2A,105C	(T)100V,473J	
C127	64.4	30.1	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
C128	51.2	28.7	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
C130	110.0	20.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C131	58.0	23.0	917 743470CM	CAP-AL.ELEC,477M,1C,105C	(T)16V 470M	
C132	106.0	26.1	916 164220LJAH	CAP-MYLAR,222J,2A,5P	(T)100V 222J	
C133	100.3	22.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C134	122.1	57.5	917 743100EM	AM CAP-AL.ELEC,107M,1E,105C	ST 01607-936-101	
C135	128.9	36.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C136	122.0	40.5	917 743100EM	AM CAP-AL.ELEC,107M,1E,105C	ST 01607-936-101	
C138	126.5	32.0	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C139	110.5	65.7	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C140	95.4	102.6	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C142	12.9	63.2	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C143	20.7	58.5	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C144	50.2	57.7	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
C146	17.8	29.3	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C147	42.2	29.6	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C148	51.5	20.0	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
C151	111.5	70.5	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
C152	112.4	60.9	917 872100QM	CAP-AL.ELEC,106M,2E,105C	(T)250V 10M	
C153	102.5	47.5	915 325100VZVH	CAP-CERAMIC,103Z,2H,DISC	10NF,500V,80-20%,Y5V,RADIAL	
C155	100.0	69.5	915 325100YZVX	CAP-CERAMIC,103Z,3D,DISC	10NF,2KV,+80 -20%,Y5V,RE-RADIAL	
C161	66.2	12.5	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
C162	77.0	13.2	916 165330LKAH	CAP-MYLAR,333K,2A,5P	T)100V 333K	
C163	112.7	15.4	917 874100CMAH	CAP-AL.ELEC,108M.1C,105C,	(T)1000UF,16V,20%,R-RADIAL	
C165	99.3	111.2	917 743100EM	AM CAP-AL.ELEC,107M,1E	ST 01607-936-101	
C172	126.1	22.5	917 743100EM	AM CAP-AL.ELEC,107M,1E	ST 01607-936-101	
C173	123.5	26.0	915 336100HZVH	CAP-CERAMIC,104Z,1H,Y5V	100NF,50V,-20 TO 80%,-82TO22%	
C181	28.9	102.9	916 165100LJAH	CAP-MYLAR,103J,2A,5	(T)100V 103J	
C182	29.5	117.9	917 874100CMAH	CAP-AL.ELEC,108M.1C,105C	(T)1000UF,16V,20%,R-RADIAL	
C183	140.9	58.4	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
C184	78.8	25.8	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
C185	63.1	65.8	916 166100LKAH	CAP-MYLAR,104K,2A,5P	(T)100V 104K	
C189	46.6	29.7	915 323330HKPH	CAP-CERAMIC,331K,1H,Y5P	330PF,50V,10%,10%,Y5P	
C190	58.5	8.0	915 323220HKPH	CAP-CERAMIC,221K,1H,Y5P	220PF,50V,10%,10%,Y5P	
C192	128.0	73.1	916 165100LJAH	CAP-MYLAR,103J,2A,5P	(T)100V 103J	
C193	49.6	96.1	915 312330HJXH	CAP-CERAMIC,330J,1H,NPO	33PF,50V,5%,NPOPPM,NPO	
C194	45.4	111.1	916 165470LJAH	CAP-MYLAR,473J,2A,5P	(T)100V,473J	
CB101	69.0	70.5	915 323100VKPH	CAP-CERAMIC,101K,2H,Y5P	100PF,500V,10%,-,-,Y5P	
CB102	119.7	108.5	917 741100QM	CAP-AL.ELEC,105M,2E,105 C	(T)250V 1M	
CB103	34.1	29.6	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
CB104	38.5	29.6	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
CB105	49.6	52.0	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
CB106	45.0	72.8	915 312390HJXH	CAP-CERAMIC,390J,1H,NPO	39PF,50V,5%,NPO,DISC-RADIAL,-	
CB107	45.0	76.2	915 311500HDXH	CAP-CERAMIC,050D,1H,NPO	5.0PF,50V,0.5PF%,NPOPPM,NPO	
CB108	63.0	77.0	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
CB109	126.4	108.5	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	
CB110	122.1	84.7	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	
CG101	68.5	86.5	915 323100VKPH	CAP-CERAMIC,101K,2H,Y5P	100PF,500V,10%,-,-,Y5P	
CG102	113.2	108.6	917 741100QM	CAP-AL.ELEC,105M,2E,105 C	(T)250V 1M	
CG103	25.2	29.6	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
CG104	29.8	24.6	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL	
CG105	37.0	56.1	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
CG106	31.9	70.1	915 312330HJXH	CAP-CERAMIC,330J,1H,NPO	33PF,50V,5%,NPOPPM,NPO	
CG107	32.0	73.8	915 311500HDXH	CAP-CERAMIC,050D,1H,NPO	5.0PF,50V,0.5PF%,NPOPPM,NPO	
CG108	62.5	90.5	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
CG109	132.4	108.5	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	
CG110	123.1	76.2	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	
CN101	7.0	35.0	935 241312KB	CON-WALL HEADER,12P,2MM	ANGLE,3WALL,SN	
CN102	6.3	109.7	935 240503JA	CON-BOX HEADER,3P,2MM	1R,ANGLE,SN,	
CN103	139.0	67.0	935 240515JA	CON-FLAT CABLE,15P,1.25	STRAIGHT,SN	
CN104	153.2	6.4	935 220705LA	CON-NO WALL,HEADER,5P,1R	ANGLE,SN,2MM,4MM	
CN601A	134.6	43.3	935 240511KA	CON-BOX HEADER,11P,2.5MM	1R,ANGLE,SN,	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
CR101	62.2	107.5	915 323100VKPH	CAP-CERAMIC,101K,2H,Y5P	100PF,500V,10%,-,-,Y5P	
CR102	106.8	108.6	917 741100QM	CAP-AL.ELEC,105M,2E,105 C	(T)250V 1M	
CR103	13.5	29.7	917 742100EM	CAP-AL.ELEC,106M,1E,105C	(T)25V 10M	
CR104	20.9	29.3	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
CR105	11.6	55.5	915 266100HJXH	CAP-CERAMIC,104J,1H,MONO	100NF,50V,5%,X7R,RE-RADIAL,DIPP	
CR106	9.9	67.1	915 312390HJXH	CAP-CERAMIC,390J,1H,NPO	39PF,50V,5%,NPO,DISC-RADIAL,-	
CR107	13.6	67.0	915 311500HDXH	CAP-CERAMIC,050D,1H,NPO	5.0PF,50V,0.5PF%,NPOPPM,NPO	
CR108	62.5	97.5	916 556100QJAL	CAP-MPETP,104J,2E,7.5P	(T)250V 104J	
CR109	138.5	108.5	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	
CR110	122.1	67.4	917 741470HM	CAP-AL.ELEC,475M,1H,105C	(T)50V 4.7M	
D101	79.0	16.8	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D102	8.6	87.1	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D105	26.7	7.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D107	8.0	6.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D109	92.2	5.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D111	10.7	116.3	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D113	10.7	118.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D114	133.3	75.7	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
D151	120.0	45.0	893 314007BA	DIODE-REC,1N4007GP,DO-41	1000V,1A,1.1V,1A,2uS	
D152	109.0	48.8	893 314007BA	DIODE-REC,1N4007GP,DO-41	1000V,1A,1.1V,1A,2uS	
DB101	30.7	16.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB102	41.5	18.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB103	25.3	82.1	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DB104	70.5	80.5	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DB105	123.0	92.0	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DB106	33.5	16.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG101	30.7	18.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG102	30.7	13.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG103	25.3	78.3	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DG104	69.7	94.0	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DG105	112.5	90.0	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DG106	22.7	11.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR101	11.5	18.9	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR102	19.5	16.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR103	6.8	74.4	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
DR104	55.8	101.0	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DR105	110.0	90.0	893 190021AANA	DIODE-SIG,BAV21,DO-35	250V,250MA,1V,100MA	
DR106	19.5	11.5	893 114148AANM	DIODE-SIG,1N4148,DO-35	75V,150MA,1V,10MA	
HS1	54.2	31.0	831 516030BA	H/SINK-TR	HEAT-SINK(TR)	
IC101	12.6	33.4	881 101207AA	IC-LIN,LM1207,VIDEO AMP	DIP,28,TRIPLE	⚠ ● ⚡
IC102	56.7	67.0	881 102427SA	IC-LIN,2427,AMP	SIP, 12P, SINGLE	⚠ ● ⚡
IC103	39.3	85.2	881 904320AA	IC-LIN,4320,OSD	DIP,16,-,-	⚠ ⚡
IC104	14.1	94.3	873 760125AA	IC-MOS,74HC125,QUAD	DIP,4,300MIL,QUAD	⚠ ⚡
IC105	106.5	113.5	887 490045AA	MV17B,10P	IC-HYB,CMH7379,VIDEO-CUT	⚠ ⚡
IC106	86.5	10.1	881 200319AA	IC-LIN,LM319,COMPARATOR	DIP,14,DUAL	⚠ ⚡
IC107	128.5	12.0	881 307905KANC	IC-LIN,7905,REGULATOR	TO-220,3,-,-5V	⚠ ⚡
IC109	157.4	49.5	883 602421AA	IC-MEM,EEPROM,24LC21	DIP,3,4000NS,5%,90MIL	⚠ ⚡

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
L102	40.6	107.1	925 001001AE	INDUCTOR-AXIAL,150UH	FIX,150UH,10%,50,-,4X10.5MM	⚠ ⚠
LB151	74.5	82.7	925 001001AU	INDUCTOR-AXIAL,0.47UH	FIX,0.47UH,20%,4X9.8MM	
LF101	47.0	7.0	943 150021AB	FILTER-LPF,EMI,LC	22PF,-25 TO 85	
LG151	97.5	99.0	925 001001AU	INDUCTOR-AXIAL,0.47UH	FIX,0.47UH,20%,4X9.8MM	
LR151	89.5	99.0	925 001001AU	INDUCTOR-AXIAL,0.47UH	FIX,0.47UH,20%,4X9.8MM	
Q101	91.7	108.1	891 123906XANC	TR-PNP,2N3906,TO-92,EBC	0.625W,40V,40V,5V,0.2A	
Q102	87.8	103.1	891 393646AA	TR-NPN,MPS3646,TO-92,EBC	-,40V,15V,5V,0.3A	
Q103	10.3	101.5	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q104	55.5	8.5	891 323904XANC	TR-NPN,2N3904,TO-92,EBC	0.625W,60V,40V,6V,0.2A	
Q181	131.5	62.0	891 123906XANC	TR-PNP,2N3906,TO-92,EBC	0.625W,40V,40V,5V,0.2A	
QB101	46.1	61.5	891 493953AA	TR-NPN,KSC3953C,TO-126,ECB	1.3W,120V,120V,3V,0.2A	
QG101	36.7	60.7	891 493953AA	TR-NPN,KSC3953C,TO-126,ECB	1.3W,120V,120V,3V,0.2A	
QR101	17.0	59.3	891 493953AA	TR-NPN,KSC3953C,TO-126,ECB	1.3W,120V,120V,3V,0.2A	
R101	48.5	15.0	911 142207YA	REF-CF,2.2K,5%,1/6W	TO +350PPM/C,R-AXIAL	
R102	46.0	21.5	911 155607YA	REF-CF,56K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R105	75.5	100.9	911 141507YA	REF-CF,1.5K,5%,1/6W	TO +350PPM/C,R-AXIAL	
R106	68.6	101.9	911 142707YA	REF-CF,2.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R107	21.0	102.0	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R108	10.3	97.9	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R109	85.5	110.4	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
R111	50.3	99.0	911 168207YA	REF-CF,330K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R112	50.4	107.9	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R114	61.0	27.0	911 121007YA	REF-CF,10,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R115	58.0	27.0	911 451205DA	REF-MF,12K,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R116	67.7	28.3	911 436805DA	REF-MF,680,1%,1/4W	250V,-100 TO +100PPM/C,R-AXIAL	
R117	28.5	63.1	911 122207FF	REF-CF,22,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
R118	9.2	38.5	911 123307YA	REF-CF,33,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R119	18.7	108.6	911 137507YA	REF-CF,750,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R120	139.1	47.6	911 354707JF	REF-MO,47K,5%,2W	500V,-200 TO +200PPM/C,R-AXIAL	
R121	40.0	9.0	911 141807YA	REF-CF,1.8K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R153	105.0	29.0	911 131007FA	REF-CF,100,5%,1/2W	350V,-350 TO +350PPM/C,R-AXIAL	
R160	61.5	14.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R161	77.5	19.5	911 134707YA	REF-CF,470,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R163	105.5	17.4	911 132207YA	REF-CF,220,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R165	82.4	7.0	911 142207YA	REF-CF,2.2K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R166	84.7	23.3	911 143307YA	REF-CF,3.3K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R167	82.5	17.8	911 131207YA	REF-CF,120,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R168	81.5	22.8	911 132207DA	REF-CF,220,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
R169	71.1	7.4	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R170	73.5	13.9	911 154707YA	REF-CF,47K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R185	50.5	90.8	911 121007YA	REF-CF,10,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R186	142.1	62.3	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R187	126.5	64.8	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R188	50.3	101.4	911 147507YA	REF-CF,7.5K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R189	50.3	93.3	911 145607YA	REF-CF,5.6K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R190	135.6	74.2	911 152707YA	REF-CF,27K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
R191	162.3	47.3	911 131007YA	REF-CF,100,1/6W	150V,-1300 TO +3500PPM/C,R-AXIAL	
R192	162.3	49.5	911 131007YA	REF-CF,100,1/6W	150V,-1300 TO +3500PPM/C,R-AXIAL	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
R193	147.3	45.2	911 154707YA	REF-CF,100,1/6W,47K	150V,-1300 TO +3500PPM/C,R-AXIAL	
R194	161.4	37.7	911 131007YA	REF-CF,100,1/6W	150V,-1300 TO +3500PPM/C,R-AXIAL	
R195	160.0	51.5	911 154707YA	REF-CF,100,1/6W,47K	150V,-1300 TO +3500PPM/C,R-AXIAL	
RB101	40.0	13.9	911 127507YA	REF-CF,75,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB102	40.0	21.4	911 127507YA	REF-CF,75,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB105	40.1	58.0	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB107	40.0	76.3	911 132707FF	REF-CF,270,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RB108	49.9	67.3	911 131807YA	REF-CF,180,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB109	43.4	69.8	911 134307CA	REF-CF,430,5%,1/8W	150V,-350 TO +350PPM/C,R-AXIAL	
RB110	117.2	85.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RB111	126.0	88.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RB112	62.5	73.5	911 162007YA	REF-CF,200K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB114	129.0	99.0	911 144707DA	REF-CF,4.7K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
RB115	26.2	92.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
RB116	127.4	83.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RB151	82.5	86.7	911 133307FF	REF-CF,330,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RB152	78.9	97.7	911 223908FA	REF-CC,39,10%,1/2W	350V,-,R-AXIAL	
RG101	33.5	11.5	911 127507YA	REF-CF,75,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG102	29.2	21.4	911 127507YA	REF-CF,75,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG105	25.5	54.9	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG107	25.3	74.0	911 132707FF	REF-CF,270,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RG108	37.2	64.6	911 131807YA	REF-CF,180,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG109	30.7	67.0	911 134307CA	REF-CF,430,5%,1/8W	150V,-350 TO +350PPM/C,R-AXIAL	
RG110	114.3	85.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RG111	120.0	89.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RG112	64.0	83.0	911 162007YA	REF-CF,200K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG114	135.0	99.0	911 144707DA	REF-CF,4.7K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
RG115	28.8	92.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
RG116	127.4	80.9	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RG151	101.0	99.0	911 133307FF	REF-CF,330,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RG152	105.0	85.5	911 223908FA	REF-CC,39,10%,1/2W	350V,-,R-AXIAL	
RR101	11.5	13.9	911 127507YA	REF-CF,75,5%,1/6W	TO +350PPM/C,R-AXIAL	
RR102	11.5	21.4	911 127507YA	REF-CF,75,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR105	9.2	57.5	911 133907YA	REF-CF,390,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR107	21.9	74.0	911 132707FF	REF-CF,270,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RR108	18.9	66.1	911 131807YA	REF-CF,180,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR109	16.4	66.1	911 134307CA	REF-CF,430,5%,1/8W	150V,-350 TO +350PPM/C,R-AXIAL	
RR110	111.4	85.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RR111	117.0	89.0	911 162707DA	REF-CF,270K,5%,1/4W	250V,-1000 TO -500PPM/C,R-AXIAL	
RR112	57.2	104.0	911 162007YA	REF-CF,200K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR114	132.0	99.0	911 144707DA	REF-CF,4.7K,5%,1/4W	250V,-350 TO +350PPM/C,R-AXIAL	
RR115	20.6	98.3	911 141007YA	REF-CF,1K,5%,1/6W	150V,-1300 TO +350PPM,R-AXIAL	
RR116	127.4	78.5	911 144707YA	REF-CF,4.7K,5%,1/6W	150V,-1300 TO +350PPM/C,R-AXIAL	
RR151	85.5	99.0	911 133307FF	REF-CF,330,5%,1/2W	300V,-200 TO +200PPM/C,R-AXIAL	
RR152	93.5	99.0	911 223908FA	REF-CC,39,10%,1/2W	350V,-,R-AXIAL	
SCREEN	99.5	78.0	935 810106AB	AM CON-TERMINAL PIN	03124-700-810	
SG151	93.0	81.0	04569-002-210	DSP-301N	SPARK-GAP	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚡ : ESD Caution)

Loc. No.	Coordinates (X,Y)		Code No.	Description	Specification	Remarks
SG152	104.2	65.7	04569-002-210	DSP-301N	SPARK-GAP	
SG153	76.5	77.5	04569-002-210	DSP-301N	SPARK-GAP	
SG154	108.5	51.5	04569-002-210	DSP-301N	SPARK-GAP	
SK1	83.5	61.5	935 720913AA	CON-JACK CRT SOCKET,12P	PHI29_D/F,SMALL TYPE	
ZD102	130.9	67.7	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD103	5.8	87.1	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD104	29.8	6.1	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD105	111.4	5.9	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD106	10.7	113.8	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD107	23.0	110.9	893 290031FB	DIODE-ZEN,UZ-5.1B,DO-35	0.5W,-,10MA,-,-,-	
ZD108	26.8	4.9	893 290002BC	DIODE-ZEN,ZPD9.1,DO-41	0.5W,8.1V,5MA,-,-,-	

(⚠ : Caution, ● : Specialty part for this monitor only, ⚠ : ESD Caution)

Loc. No.	Coordinates (X,Y)	Code No.	Description	Specification	Remarks
OTHERS					
S/CABLE		955 460589AAAA	CBF-SIGNAL CABLE,1830MM,15P	ATT/MAL/CORE,DDC,CMG7377	
CRT		897 250144CA	CRT, COLOR,17" (HITACHI MPRII)	M41KVZ680X72	⚠
CRT		897 250183AA	CRT, COLOR,17" (SDD MPRII)	M41KUK36X01	⚠
D-COIL		925 460193CA	COIL-DEGAUSSING, 8.45mH	110T,255X255MM,27.60hm	
CRT GND		955 460550AAAA	CBF-CRT GROUND ASS'Y	CMG7377	
P/CORD		955 001437AAAA	CBF-POWER CORD,1830MM	MSP-48E,KSC3304,VCTFO.75MMX3C	KOREA
P/CORD		955 001434AAAA	CBF-POWER CORD,1850MM,UC	KKP-30,KKS-16A,SVT#3/18,125V,7A	U.S.A
P/CORD		955 001439AAAB	CBF-POWER CORD,1220MM,EC	EU,LS13/14,H05W-F0.57MMX3,GFC-3	SEUK
P/CORD		955 001443AAAA	CBF-POWER CORD,1830MM,AU	SP502B,3ASL/100.IS-14,IVORY	SEAU
P/CORD		955 001435AAAA	CBF-POWER CORD,1850MM,EU	KKP-4819R,KKS-16A,220V,6A(HP)	EUROPE
MAIN PCB ASS'Y		257 211070AABP	ASS'Y-PWA,MAIN	CMG7377	
VIDEO PCB ASS'Y		257 211080AAKD	ASS'Y VIDEO	CMG7377	

Memo

12-5 Schematic Diagrams

Caution

1. The areas shaded or marked with ⚠ on the schematic diagram and parts list designate components which have special characteristics important for safety. Replace these parts only with parts identical to those in the original circuit or specified in the parts list. Before replacing any of these components carefully read the "Product Safety Notice."
2. When taking measurements, pay special attention to the following:

   1) Do not use your instrument between primary ground (symbol ⏚) and secondary circuit.

   2) Do not use your instrument between secondary ground (symbol ⏚) and primary circuit.

Warning

This equipment contains safety critical components. All parts shown with the ⚠ mark on the schematic are safety critical.

Replace safety critical parts with only manufacturers recommended parts. See parts list for exact replacements.

Note

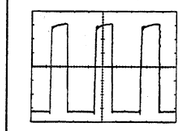
1. Resistance is shown in OHM. K = 1000 M = 1,000,000 and the rated power of resistors not noted in schematic diagram is 1/4W.
2. Capacitance is shown in μF. Capacitances not otherwise noted are shown in pF (1μF = 1,000,000 pF). Rated voltage of condensers not otherwise noted in schematic diagram is 50 V.
3. Abbreviations and Symbols

MO	R-METAL OXIDE	WW	R-WIRE WOUND
FU	FUSIBLE	C	R-COMPOSITION
CM	R-CEMENT MPP METAL POLYPROPYLENE		
MP	C-METAL POLYESTOR	PP	C-POLYPROPYLENE
P	C-POLYESTOR	T	C-TANTALIUM
⏚	HOT GROUND	⏚	COLD GROUND

4. The secondary voltage is read with an SSVM from the indicated point to cold ground (⏚). The primary voltage is read with an SSVM from the indicated point to hot ground (⏚).
5. This schematic diagram is subject to change without notice.

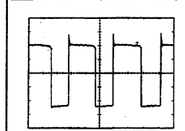
: Power Line
: Signal Line

1 13.360 V (IC601 #2)



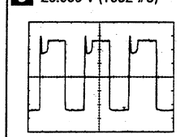
CH1 P-P = 13.360 V CH1 RMS = 7.6397V

2 272.00 V (Q603 Drain)

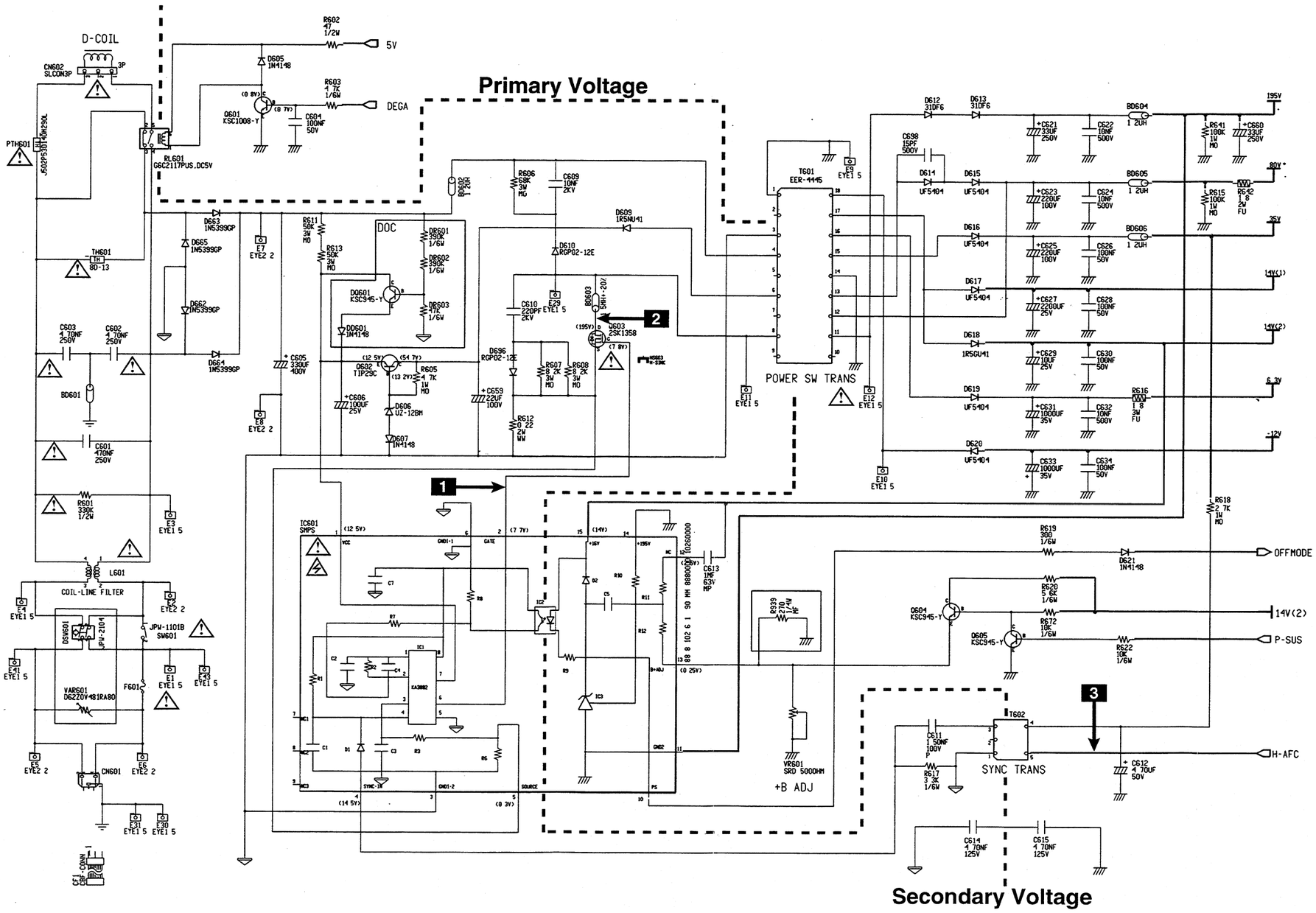


CH1 P-P = 272.00 V CH1 RMS = 173.02 V

3 28.000 V (T602 #6)

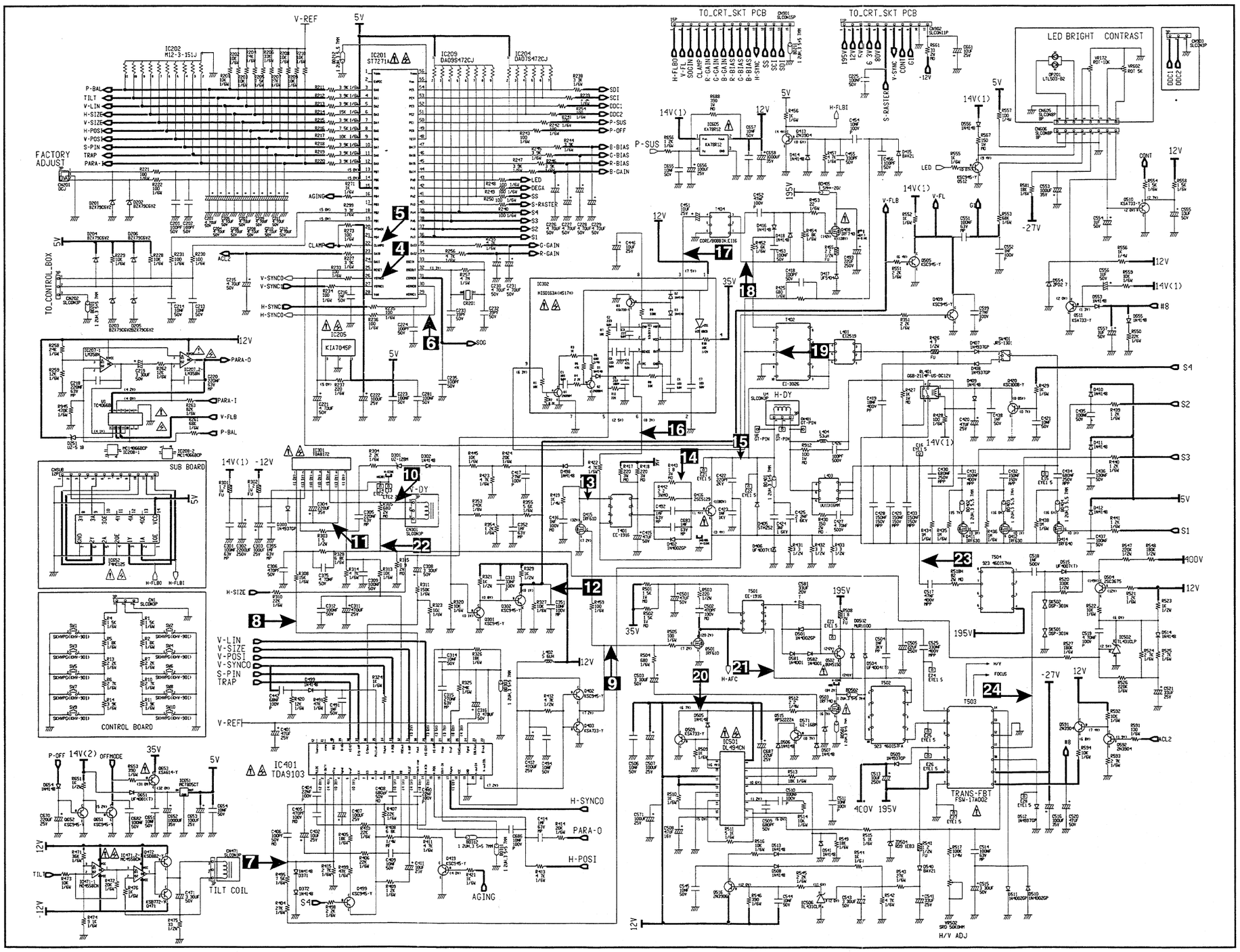


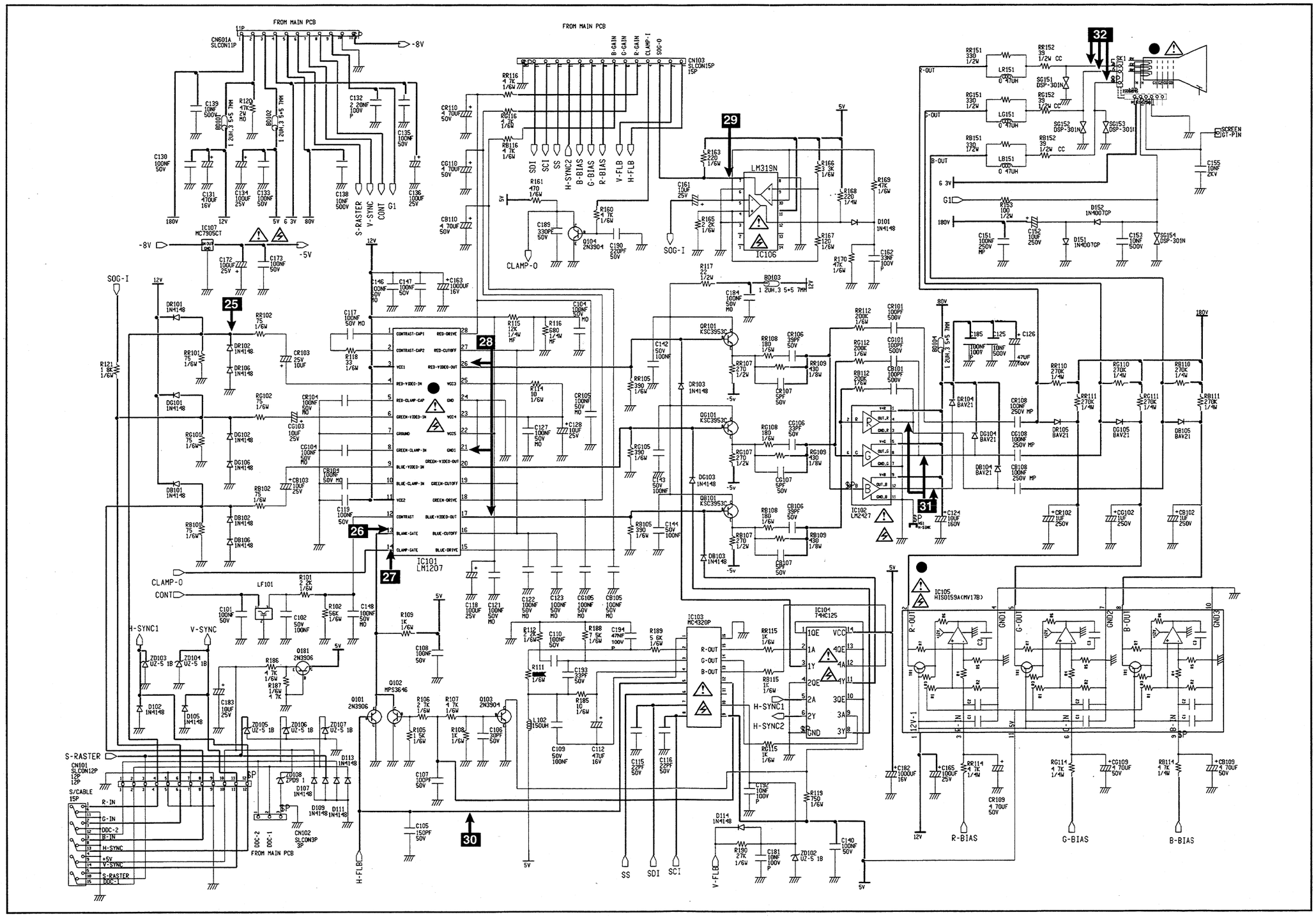
CH1 P-P = 28.000 V CH1 RMS = 18.387 V



12-5-2 Main Schematic Diagram and Waveforms

——— : Power Line
——— : Signal Line

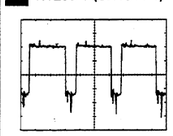




——— : Power Line

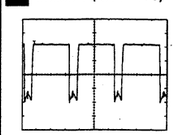
——— : Signal Line

25 1.1280 V (CN101 #4)



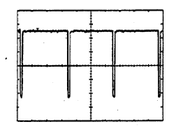
CH1 P-P = 1.1280 V CH1 RMS = 886.52 mV

26 4.3600 V (IC101 #13)



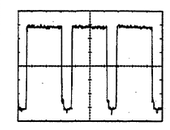
CH1 P-P = 4.3600 V CH1 RMS = 4.4677 V

27 4.9600 V (IC101 #14)



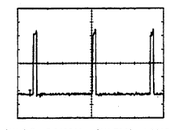
CH1 P-P = 4.9600 V CH1 RMS = 4.8031 V

28 3.3600 V (IC101 #17,21,26)



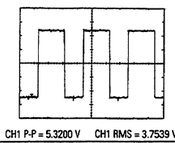
CH1 P-P = 3.3600 V CH1 RMS = 2.6948 V

29 5.0400 V (IC106 #7)



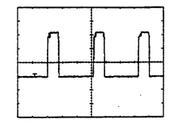
CH1 P-P = 5.0400 V CH1 RMS = 1.3218 V

30 5.3200 V (IC103 #12)



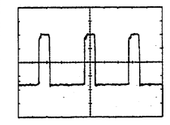
CH1 P-P = 5.3200 V CH1 RMS = 3.7539 V

31 33.600 V (IC102 #4,8,12)



CH1 P-P = 33.600 V CH1 RMS = 44.006 V

32 38.400 V (CRT Socket #3,5,8)



CH1 P-P = 38.400 V CH1 RMS = 74.331 V